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UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF WASHINGTON

UNITED STATES OF AMERICA

*EX REL. GARY BRUNSON,*

DONNA BUSCHE, AND

WALTER TAMOSAITIS, PH.D.

RELATORS,

VS.

BECHTEL NATIONAL INC.,

BECHTEL CORPORATION, URS

CORPORATION, AND URS

ENERGY & CONSTRUCTION,

INC.

DEFENDANTS.

CIVIL ACTION NUMBER: CV-13-5013-EFS

SECTION:

DISTRICT JUDGE:

**ORIGINAL COMPLAINT**

**FILED UNDER SEAL**

DEMAND FOR JURY TRIAL

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2 **I. INTRODUCTION AND SUMMARY OF ALLEGATIONS**

3       1. This is an action to recover damages, civil penalties, and other  
4 relief from Bechtel Corporation, Bechtel National Inc., URS Corporation,  
5 and URS Energy and Construction, Inc. for causing great harm to the  
6 United States by perpetuating a conspiracy by and between themselves  
7 and even certain members of the Department of Energy (DOE) to defraud  
8 the government of hundreds of millions of dollars in supposed design,  
9 testing and development of the Hanford Waste Treatment Plant (WTP).  
10 The WTP is intended to treat and ultimately vitrify hundreds of tanks of  
11 high-level radioactive and chemical wastes, referred to as mixed waste,  
12 currently stored at the Hanford Site, a one-time nuclear production  
13 complex that is in the process of being decommissioned. The Hanford Site  
14 is located on the Columbia River in the mid-south area of Washington  
15 state.

16       2. Since 2000, Defendants have designed and constructed the  
17 Hanford WTP in ways it knew failed to conform to requirements and  
18 specifications of government contracts in myriad ways, most of which  
19 constitute systemic failures of Bechtel's design, procurement, construction,  
20 testing, and installation processes. These include, by way of example, the  
21 following:

- 1           a.       Failure to flowdown design requirements;
- 2           b.       Inadequate specifications;
- 3           c.       Material control deficiencies;
- 4           d.       Failure to promulgate required quality assurance  
procedures;
- 5           e.       Inadequate quality controls systems;
- 6           f.       Inadequate quality inspection documents;
- 7           g.       Inadequate receiving inspection of materials;
- 8           h.       Failing to conduct required audits of vendors;
- 9           i.       Falsely certifying compliance with Nuclear Quality  
Assurance-1 (NQA-1);
- 10          j.       Inadequate reporting of nonconformances;
- 11          k.       Denial of the existence of technical issues;
- 12          l.       Inadequate corrective action program; and
- 13          m.      Failing to address internal corrective action  
findings.

17       3. Defendants certify to the United States that the testing,  
18 designing, and constructing of the Hanford WTP, including the  
19 procurement of structures, systems, and components, conform to  
20 drawings, specifications, contract requirements, and quality procedures  
21 when they do not.

1  
2       **II. PARTIES**

3       4. Defendant Bechtel Corporation is a foreign corporation doing  
4 business in Washington and the United States. Defendant Bechtel  
5 Corporation is the owner and operator of a worldwide vertically integrated  
6 business providing engineering, procurement, and construction services to  
7 civil infrastructure, communications, transportation, mining and metals, oil  
8 and gas, chemicals, power, and government industries in the United States.  
9 Bechtel Corporation conducts such businesses in Washington and the  
10 United States through a number of subsidiaries including Defendant  
11 Bechtel National Inc. Bechtel Corporation is the alter ego of Bechtel  
12 National Inc., or in the alternative, Bechtel Corporation is using subsidiary  
13 Bechtel National Inc. as its agent, or Bechtel Corporation and Bechtel  
14 National Inc. are one single integrated enterprise. Defendant Bechtel  
15 Corporation is incorporated under the laws of the state of Nevada, with its  
16 home office at 50 Beale Street, San Francisco, California 94105. Defendant  
17 Bechtel Corporation may be served with process through its registered  
18 agent for service, C T Corporation, at 818 West Seventh Street, Los Angeles,  
19 California 90017.

20       5. Defendant Bechtel National Inc. is a foreign corporation doing  
21 business in Washington and the United States. Defendant Bechtel National

1 Inc. is a wholly owned subsidiary of Bechtel Corporation. Defendant  
2 Bechtel National Inc. is a contractor for the DOE's Office of River Protection  
3 (ORP) at the Hanford Nuclear Site, and is charged with the design,  
4 construction, commissioning, and startup of the Waste Treatment Plant at  
5 the Site. Defendant Bechtel National Inc. is a subsidiary of Bechtel  
6 Corporation, and Bechtel Corporation is the alter ego of Bechtel National  
7 Inc. or in the alternative, Bechtel Corporation is using Bechtel National Inc.  
8 as its agent with respect to engineering, construction and technical services  
9 provided to the United States government, or Bechtel Corporation and  
10 Bechtel National Inc. are one single integrated enterprise. Defendant  
11 Bechtel National Inc. is incorporated under the laws of the state of Nevada  
12 with its home office at 50 Beale Street, San Francisco, California 94105.  
13 Defendant Bechtel National Inc. may be served with process through its  
14 registered agent, The Corporation Company, at 555 Capitol Mall, Ste. 1000,  
15 Sacramento, California 95814.

16       6. Bechtel Corporation and Bechtel National Inc. are collectively  
17 referred to herein as "Bechtel."

18       7. Defendant URS Corporation is a foreign corporation doing  
19 business in Washington and the United States. Defendant URS  
20 Corporation is the owner and operator of a worldwide vertically integrated  
21 business providing engineering, construction and technical services for

1 public agencies and private sector companies around the world. URS  
2 Corporation conducts such businesses in Washington and the United States  
3 through a number of subsidiaries including Defendant URS Energy &  
4 Construction, Inc. URS Corporation is the alter ego of URS Energy &  
5 Construction, Inc., or in the alternative, URS Corporation is using  
6 subsidiary URS Energy & Construction, Inc. as its agent, or URS  
7 Corporation and URS Energy & Construction, Inc. are one single integrated  
8 enterprise. Defendant URS Corporation is incorporated under the laws of  
9 the state of Delaware with its home office at 600 Montgomery Street, 26<sup>th</sup>  
10 Floor, San Francisco, California 94111. Defendant URS Corporation may be  
11 served with process through its registered agent, C T Corporation System,  
12 at 818 W. Seventh Street, Los Angeles, California 90017.

13       8. Defendant URS Energy & Construction, Inc. is a foreign  
14 corporation doing business in Washington and the United States.  
15 Defendant URS Energy & Construction, Inc. is a subsidiary of URS  
16 Corporation, and URS Corporation is the alter ego of URS Energy &  
17 Construction, Inc. or in the alternative, URS Corporation is using URS  
18 Energy & Construction, Inc. as its agent with respect to engineering,  
19 construction and technical services provided to the United States  
20 government, or URS Corporation and URS Energy & Construction, Inc. are  
21 one single integrated enterprise. Defendant URS Energy & Construction

1 Inc. is incorporated under the laws of the state of Ohio with its home office  
2 at 720 E. Park Blvd, Boise, Idaho 83712. Defendant URS Energy &  
3 Construction, Inc. may be served with process through its registered agent,  
4 C T Corporation System, at 111 W. Jefferson Street, Boise, Idaho 83702.

5 9. URS Corporation and URS Energy & Construction, Inc. are  
6 collectively referred to herein as "URS."

7 **III. RELEVANT NON-PARTIES**

8 1. Frank Russo is Bechtel's Project Director for the Hanford WTP.  
9 In that position, Russo had actual knowledge of Bechtel's submission of  
10 false claims and Bechtel's unsafe practices at the WTP. All of his  
11 knowledge of Bechtel's practices leading to False Claims Act violations is  
12 attributable directly to Bechtel.

13 2. Russo was part of a "core group" of Bechtel, URS, and ORP  
14 upper management, including Greg Ashley, William Gay, Ines Triay,  
15 Shirley Olinger, Dae Chung, Dale Knutson, and Thomas Brown, who were  
16 aware of the myriad of unsafe practices at the WTP and the False Claims  
17 Act.

18 3. Greg Ashley was Bechtel's Technical Director for the Hanford  
19 WTP until 2011. Ashley is currently the President of the Nuclear Power  
20 section of Bechtel and recently participated in the DOE directed safety  
21 evaluation of the Hanford WTP.

1       4. Ashley was part of a “core group” of Bechtel, URS, and ORP  
2 upper management, including Frank Russo, William Gay, Ines Triay,  
3 Shirley Olinger, Dae Chung, Dale Knutson, and Thomas Brown, who were  
4 aware of the myriad of unsafe practices at the WTP and the False Claims  
5 Act.

6       5. William “Bill” Gay is a URS Vice President at the Hanford  
7 WTP.

8       6. Gay was part of a “core group” of Bechtel, URS, and ORP  
9 upper management, including Frank Russo, Greg Ashley, Ines Triay,  
10 Shirley Olinger, Dae Chung, Dale Knutson, and Thomas Brown, who were  
11 aware of the myriad of unsafe practices at the WTP and the False Claims  
12 Act.

13       7. Dale Knutson served as the Deputy Project Director for the  
14 Capability Replacement Laboratory at the Pacific Northwest National  
15 Laboratory (PNNL). In this position, he was responsible for ensuring the  
16 Pacific Northwest safely and cost-efficiently built modern laboratories in  
17 2010. Nearly 50% of this lab space is at the Hanford site. Knutson also  
18 served as the Federal Project Director for the Hanford WTP from  
19 approximately June of 2010 to June of 2012, as an interagency transfer from  
20 PNNL. In this assignment, Knutson was fully integrated into DOE.

1       8. Knutson was part of a “core group” of Bechtel, URS, and ORP  
2 upper management, including Frank Russo, Greg Ashley, Bill Gay, Ines  
3 Triay, Shirley Olinger, Dae Chung, and Thomas Brown, who were aware of  
4 the myriad of unsafe practices at the WTP and the False Claims Act.

5       9. Shirley Olinger served as the ORP Site Manager for Hanford  
6 WTP from 2007 to 2010. In 2010, at the behest of Dale Knuston, Olinger  
7 was forced out of her Manager’s position and retired two years later from  
8 federal service after reaching retirement eligibility. In the interim two  
9 years she was reassigned by Ines Triay, identified below, to a DOE  
10 headquarters position, but remained in Richland, officing from her home  
11 and the Federal Building where her husband, a DOE employee, also  
12 maintained an office. Subsequently, in 2012, Olinger started a consulting  
13 firm, Independent Strategic Management Solutions, Inc. (ISMS). Upon  
14 information and belief, her consulting firm has secured lucrative contracts  
15 with Bechtel and URS. In the week of January 21, 2013, Olinger visited the  
16 Hanford WTP and met with Frank Russo and other Bechtel and URS  
17 management. In this meeting, Frank Russo commented that he planned to  
18 utilize Olinger’s consulting services for “many aspects” of the Hanford  
19 WTP.

20      10. Olinger was part of a “core group” of Bechtel, URS, and ORP  
21 upper management, including Frank Russo, Greg Ashley, Bill Gay, Ines

1 Triay, Dae Chung, Dale Knutson, and Thomas Brown, who were aware of  
2 the myriad of unsafe practices at the WTP and the False Claims Act.

3       11. Ines Triay served as assistant DOE secretary of DOE  
4 Environment Management from 2008 to 2011. In previous DOE  
5 assignments, Triay had worked closely with Frank Russo. Triay is  
6 currently a consultant of ISMS, the consulting firm started by Shirley  
7 Olinger. Upon information and belief, Triay is a silent partner of ISMS.

8       12. Triay was part of a “core group” of Bechtel, URS, and ORP  
9 upper management, including Frank Russo, Greg Ashley, Bill Gay, Shirley  
10 Olinger, Dae Chung, Dale Knutson, and Thomas Brown, who were aware  
11 of the myriad of unsafe practices at the WTP and the False Claims Act.

12       13. Dae Chung was the Principal Deputy Assistant Secretary of  
13 Environmental Management at DOE. Chung is currently the DOE  
14 Principal Deputy Assistant Secretary.

15       14. Chung was part of a “core group” of Bechtel, URS, and DOE  
16 upper management, including Frank Russo, Greg Ashley, Bill Gay, Ines  
17 Triay, Shirley Olinger, Dale Knutson, and Thomas Brown, who were aware  
18 of the myriad of unsafe practices at the WTP and the False Claims Act.

19       15. Thomas Brown is the Deputy Federal Project Director for ORP.  
20 Prior to becoming a federal employee, Brown led a 20 year executive career  
21 at Bechtel.

1       16. Brown was part of a “core group” of Bechtel, URS, and DOE  
2 upper management, including Frank Russo, Greg Ashley, Bill Gay, Ines  
3 Triay, Shirley Olinger, Dale Knutson, and Dae Chung who were aware of  
4 the myriad of unsafe practices at the WTP and the False Claims Act.

5 **IV. JURISDICTION AND VENUE**

6       17. This action arises under the United States False Claims Act, 31  
7 U.S.C. § 3729 et seq.

8       18. This Court has jurisdiction pursuant to 31 U.S.C. § 3732(a) and  
9 28 U.S.C. § 1331.

10       19. There was not, prior to filing the Original Complaint in this  
11 case, any “public disclosure” of the false claims identified herein as that  
12 term is used in the False Claims Act, 31 U.S.C. § 3730(e)(4)(A). However,  
13 even if a “public disclosure” has occurred, Relators’ claims are not barred  
14 pursuant to 31 U.S.C. § 3730(e)(4)(B) because Relators are “original  
15 sources” of the information underlying and becoming Relator’s false claims  
16 identified herein.

17       20. Gary Brunson was the ORP Engineering Director responsible  
18 for the WTP until his involuntary retirement in January of 2013. Relator  
19 Brunson has direct and independent knowledge of the information  
20 underlying his claims as set forth in this Original Complaint, and he  
21 voluntarily provided all such information to the United States government

1 before the filing of this Original Complaint. Even if certain allegations or  
2 transactions described herein have been publically disclosed, the  
3 information possessed by Relator Brunson and provided to the United  
4 States government materially adds to publically disclosed allegations and  
5 transactions, if any. He, therefore, is an “original source” as that term is  
6 used in the False Claims Act, 31 U.S.C. § 3730 (e)(4)(B).

7       21. Donna Busche is the WTP Environmental and Safety Manager  
8 and designated as key personnel in the WTP contract. Relator Busche is  
9 employed by URS. Relator Busche has direct and independent knowledge  
10 of the information underlying her claims as set forth in this Original  
11 Complaint, and she voluntarily provided all such information, together  
12 with supporting documentation to various agencies of the United States  
13 before the filing of this Original Complaint. Even if certain allegations or  
14 transactions described herein have been publically disclosed, the  
15 information possessed by Relator Busche and provided to the United States  
16 government materially adds to publically disclosed allegations and  
17 transactions, if any. She, therefore, is an “original source” as that term is  
18 used in the False Claims Act, 31 U.S.C. § 3730 (e)(4)(B).

19       22. Walter Tamosaitis, Ph.D. was the WTP Research & Technology  
20 Manager and Deputy Chief Process Engineer prior to his forced departure  
21 from the WTP in June of 2010. Relator Tamosaitis has direct and

1 independent knowledge of the information underlying his claims as set  
2 forth in this Original Complaint, and he has voluntarily provided all such  
3 information to the United States government before the filing of this  
4 Original Complaint. Even if certain allegations or transactions described  
5 herein have been publically disclosed, the information possessed by  
6 Relator Tamosaitis and provided to the United States government  
7 materially adds to publically disclosed allegations and transactions, if any.  
8 He, therefore, is an "original source" as that term is used in the False  
9 Claims Act, 31 U.S.C. § 3730 (e)(4)(B).

10       23. Venue is proper with respect to all parties in the United States  
11 District Court for the Eastern District of Washington pursuant to 28 U.S.C.  
12 § 1391(b), (c) and 31 U.S.C. § 3732(a) because all Defendants transact  
13 business in this District and because Relators, during all times material to  
14 this matter, were employed in this District.

15 **V. FACTUAL ALLEGATIONS**

16       A. **BACKGROUND: A CENTURY OF HANFORD**

17       24. Nuclear operations began at the Hanford Site in approximately  
18 1943. At least a century will pass before the WTP is capable of  
19 immobilizing mixed waste resulting from past nuclear operations.

1           1. *Beginnings: A Nuclear Facility at Hanford*

2       25. The Hanford Site was established as part of the Manhattan  
3 Project and was home to the first full-scale plutonium reactor in the  
4 world—the B Reactor. The bomb dropped on Nagasaki, Japan contained  
5 plutonium manufactured at Hanford.

6       26. Over 45 years, a total of nine plutonium production reactors  
7 and six large processing facilities were built with the Hanford Site  
8 producing the plutonium for the majority of weapons in the U.S. nuclear  
9 stockpile. The weapons production reactors have been in the  
10 decommissioning process since the Cold War.

11           2. *Storing the Chemical Nuclear Waste Left Behind from  
12 Plutonium Production.*

13       27. The decades of plutonium manufacturing resulted in 53 million  
14 gallons of high-level radioactive and chemical wastes, referred to as  
15 “mixed” waste. Over time, 177 large tanks, ranging in capacity from 55,000  
16 gallons to more than 1,000,000 gallons, were constructed to house the  
17 waste. One hundred and forty-nine of these tanks are single shell and were  
18 built at Hanford between 1943 and 1964. The remaining 28 were built  
19 between 1968 and 1986 with double shells. All of the tanks have outlived  
20 their life span.

1       28. Collectively referred to as the "Tank Farm," the 177 tanks have  
2 struggled to maintain structural soundness, resulting in many confirmed  
3 leaks. It is estimated that 67 of the 147 single shell tanks are leaking and at  
4 least one of these double shell tanks is leaking. The environmental hazards  
5 posed by the leaking Tank Farm are extreme. The radioactive and chemical  
6 wastes are toxic to the environment and deadly to humans.

7       29. Seeking to correct and prevent further damage from the mixed  
8 waste contaminating the Hanford Site, the United States Environmental  
9 Protection Agency (EPA), DOE, and the State of Washington Department  
10 of Ecology signed a comprehensive cleanup and compliance agreement in  
11 1989. The agreement, known as the "Tri-Party Agreement," eventually  
12 became a Consent Decree following litigation. The Consent Decree  
13 requires and serves the purpose of bringing the Hanford site, including the  
14 Tank Farm into compliance with existing federal and state environmental  
15 laws that govern the management and cleanup of hazardous wastes and  
16 hazardous waste sites. The Tri-Party Agreement includes numerous  
17 mandatory milestones that the DOE must achieve in order to remain  
18 compliant with the legally binding agreement. One such category of  
19 milestones pertains to the removal and immobilization of the mixed waste  
20 from the Tank Farm. To accomplish this, DOE decided to vitrify the waste,

1 just as has been done at other nuclear waste treatment facilities across the  
2 world.

3           ***3. Immobilizing the Mixed Waste Through Vitrification***

4       30. Vitrification has been recognized as the solution to managing  
5 radioactive wastes for roughly 60 years and is the preferred method of  
6 immobilizing radioactive waste for disposal.

7       31. Since the 1970s, facilities across the world have constructed  
8 melters to vitrify radioactive wastes and the melter technologies  
9 employed by these various facilities are recognized as mature and  
10 standard.

11           **a) Vitrification of Chemical Nuclear Waste Has Been**  
12           **Successfully Achieved Worldwide.**

13       32. Vitrification facilities have been built at LaHague in France,  
14 Kalpakkam in India, Lanzhou in China, Mayak in Russia, Sellafield in the  
15 United Kingdom, Rokkasho in Japan, Tarapur in India, Tokai in Japan,  
16 Trombay in India, the Savannah River Site in South Carolina, and also the  
17 West Valley Demonstration Project in New York.

18       33. To date, vitrification facilities across the world have produced  
19 tens of thousands of metric tons of vitrified nuclear waste.

20       34. One of the largest radioactive waste vitrification plants in the  
21 world is the Defense Waste Processing Facility located at the Savannah

1 River Site in South Carolina. Construction of this facility took 13 years,  
2 starting in late 1983 with operations beginning in March 1996. Until 1989,  
3 Bechtel was the design/construction contractor for this facility. By 2019,  
4 the facility will have produced 6,000 canisters of vitrified waste that are  
5 each ten feet tall and two feet in diameter, weighing over 5,000 pounds.

6 35. Another United States facility, the West Valley Demonstration  
7 Project, which had accumulated approximately 2 million gallons of  
8 radioactive sludge including 600,000 gallons of high level waste, took  
9 approximately 9 years to build (1986-1995). The facility began vitrification  
10 of high level wastes in 1996 and completed vitrification of all wastes in  
11 2002, producing over 9 million pounds of glass. URS was the prime  
12 operator of this facility.

13 36. France is recognized as the grandfather of nuclear waste  
14 vitrification. The vitrification facility at La Hague, France is the oldest of  
15 the vitrification plants. In 1952, France launched a research and  
16 development program to study vitrification of nuclear waste, and by 1957,  
17 France had commissioned a laboratory scaled vitrification unit. Shortly  
18 thereafter, France had commissioned the first vitrification pilot unit. This  
19 first facility was called "PIVER" and operated successfully from 1969-  
20 1973, producing 12 tons of glass containing radioactive waste. PIVER  
21 resumed operation in 1979 and continued vitrification of nuclear waste

1 until it was decommissioned around 1990. France developed a second  
2 vitrification facility in parallel to PIVER called the "Atelier de Vitrification  
3 de Marcoule" or "AVM". The AVM started active operation in June 1978  
4 and operated until 1997, producing 2,731 glass canisters corresponding to  
5 2,189 cubic meters of fission products and 977 tons of glass. France has  
6 continued to open other vitrification facilities, which as of 2010 have  
7 produced a combined 17,200 canisters of vitrified nuclear waste.

8 37. England, utilizing the melter technology developed in France,  
9 began construction of the Sellafield Waste Vitrification Plant in 1983. This  
10 facility, located in Cambria, England, opened eight years later, on  
11 February 26, 1991. Many aspects of the Hanford WTP are based and  
12 attributable to the Sellafield design.

13 38. Bechtel and URS have past experience in the design,  
14 construction, and operation of DOE vitrification facilities. Bechtel was a  
15 major participant in the design and construction Defense Waste Processing  
16 Facility located at the Savannah River Site. URS is the current operator of  
17 this facility. URS was also the operator of the West Valley Plant in New  
18 York.

19                   **b) Vitrification at Hanford**

20 39. The Hanford WTP is targeted to be the largest vitrification  
21 facility capable of handling mixed waste. The baseline plan for Hanford

1 WTP is to receive mixed waste from the Tank Farm, and through  
2 Pretreatment (PT), separate the waste into two streams, one made up of  
3 low-activity waste (LAW) and the other of high-level waste (HLW), and  
4 separately immobilize the LAW and HLW through vitrification. Low-  
5 activity waste has low levels of radioactive materials and controlled  
6 contact is permitted with little harm to humans. High-level waste  
7 contains high levels of radiative materials and all maintenance must be  
8 done remotely to minimize exposure to humans.

9       40. The vitrification process primarily takes place in three facilities:  
10 PT facility, HLW facility, and LAW facility.

11       41. Vitrification at the Hanford Waste Treatment Plant is designed  
12 to begin at the Pretreatment facility, the largest facility in the complex. The  
13 high and low solids PT feed will be separately pumped through an  
14 underground piping system from the Tank Farm to interior receipt vessels  
15 located in the PT facility.

16       42. The wastes are then processed in batches to meet specific  
17 rheological and chemical conditions. PT will then separate the waste into  
18 two streams, the LAW, which is mainly liquid with moderate danger level,  
19 and HLW, which are concentrated solids with highly dangerous materials,  
20 including plutonium and uranium.

1       43. These physical and chemical separation processes will  
2 primarily take place in a hot cell located on the main level of the PT facility.  
3 The hot cell will contain ultra-filtration equipment (or more commonly  
4 referred to as cross-flow filtration) and cesium-ion exchange columns in  
5 addition to ancillary equipment. This cross-flow technology is an  
6 established process utilized at other vitrification facilities, including the  
7 West Valley Demonstration Project in New York.

8       44. Using ultra-filtration technology, the solids will then be filtered  
9 out to provide HLW high solids feed, and an ion exchange process will  
10 remove the remaining soluble, highly radioactive cesium from the liquid  
11 LAW feed stream. The cesium is then eluted from the exchange columns  
12 and combined with the high solids HLW feed stream.

13       45. For final processing, the low-activity liquid will proceed to the  
14 LAW facility and the high-level liquid and solids will continue to the HLW  
15 facility.

16       46. The LAW facility will have two melters located in a single  
17 gallery. The LAW facility will employ standard melter technology to  
18 vitrify the wastes. Glass forming materials, like silica, will be added to the  
19 waste to achieve a 20% waste to 80% glass ratio.

20       47. The LAW mixture will then be turned into molten glass and  
21 poured into stainless steel containers that are seven feet tall and four feet in

1 diameter. Once full, the seven-ton canisters containing the LAW will  
2 undergo mechanical lidding and decontamination and will be transported  
3 to the integrated disposal facility on the Hanford site for storage.

4       48. The HLW facility will immobilize the most dangerous waste at  
5 Hanford by applying standard melter technology. The facility will house  
6 two 40-ton melters. High-level waste requires a 70% glass to 30% waste  
7 ratio for safe storage. When the 15 feet tall, two feet in diameter, four ton  
8 canisters are full of the glass mixture, the lids will be welded shut and the  
9 canisters will be immersed in a solution that dissolves a thin layer of the  
10 canister's surface to ensure that any harmful radioactive contamination is  
11 removed. The decontaminated canisters will then be placed inside  
12 shielded containers before being transported to a national geological  
13 suppository for permanent disposal.

14       49. To ensure the safety of the public and the environment, the PT,  
15 HLW, and LAW facilities are required to maintain safety systems and  
16 redundant safety systems. Any system, service, or component in these  
17 facilities deemed to be important to safety is held to a higher standard.  
18 This ensures the utmost protection in an event caused by malfunction in  
19 the design (referred to as design basis event) or a natural disaster caused  
20 by volcanic ash, earthquake, flooding, etc.

50. The crisis at Fukushima demonstrates the basis for a higher standard for safety systems, services, and components.

51. Although the Hanford WTP is unique in its size, the vast majority of the Hanford WTP design is based on standard technologies employed by other vitrification and treatment facilities and applicable regardless of the size of a facility. For example, using pulse-jet mixers in the vessels and sealing off wastes in black cells have been successfully employed at Sellafield, and aspects of the PT facility are based on the Sellafield design. While Bechtel may not apply certain technologies in the exact same manner as other facilities, the fundamentals of these technologies are unchanging.

#### **4. Transfer of Design and Construction from BNFL to Bechtel**

52. In 1994, DOE decided to pursue a privatization program for cleaning up the agency's contaminated nuclear sites, including the development of Hanford's vitrification facility. The privatization program was intended to reduce costs by allowing contractors to procure financing from commercial markets.

53. On September 25, 1996, upon an initial estimate that building the plant would cost \$3.2 billion, BNFL Inc. was awarded the contract to

1 design, build, and operate the vitrification facility to treat and immobilize  
2 radioactive liquid wastes stored in the 177 underground tanks at Hanford.

3 54. On September 25, 1996, the same day BNFL Inc. was awarded  
4 the contract, Bechtel announced through a press release that it would be  
5 joining the BNFL team to provide detailed design, procurement, and  
6 construction services.

7 55. Chris Judd, Bechtel's program manager for the privatization  
8 effort, said that during the project's initial 16 month "Proof of Concept"  
9 phase, Bechtel and other subcontractors would develop a conceptual  
10 design and prepare permit applications, scope and pricing documents,  
11 regulatory framework development, and a safety program for the waste  
12 treatment facility.

13 56. In 1998, BNFL Inc. more than doubled the cost estimate it made  
14 two years earlier, claiming that the facility would cost \$6.9 billion.

15 57. Despite the cost increases, the project moved forward with  
16 BNFL's schedule proceeding for design, construction, and commissioning  
17 in a series fashion typical for most construction projects. Activities were  
18 to be serially executed, including: design development, safety  
19 documentation development, procurements, construction, acceptance  
20 testing, and commissioning.

1       58. In 2000, BNFL Inc. once again more than doubled the cost  
2 estimate it made two years earlier and claimed the facility would cost  
3 approximately \$15 billion. In response to the price hike, DOE cancelled its  
4 contract with BNFL Inc. and decided to pursue a cost-plus-incentive fee  
5 contract instead of continuing with the privatization program adopted in  
6 1994.

7       59. Mike Lawrence, a former ORP site manager, asserted that the  
8 WTP could not be completed for less than approximately \$6.5 billion.

9       60. In 2000, Bechtel, a former member of the BNFL Inc. team, was  
10 awarded the job through a competitive contract bid, receiving a \$4.3  
11 billion deal when it assured the DOE that it could do the work for less  
12 than BNFL's price.

13       61. Upon information and belief, Bechtel knew that it could likely  
14 not complete the work for the \$4.3 billion bid price.

15       62. This contract between Bechtel and DOE is identified as  
16 Contract No. DE-AC27-01RV14136 (Bechtel-DOE Contract).

17       63. Pursuant to this contract, a modified execution strategy referred  
18 to as "close-coupling" was adopted, allowing Bechtel to break the project  
19 up into parts such that portions of the project could proceed faster than  
20 the traditional process.

1       64. As a result, the WTP is being designed and built in five facility  
2 segments—PT facility, LAW facility, HLW facility, LAB, and the balance  
3 of facilities—which makes each part a discrete and smaller project. As the  
4 design and safety documentation of each segment are completed, the  
5 Bechtel-DOE Contract permits the procurement, and construction to  
6 proceed on that portion of the design.

7           5. *Bechtel's Contract to Design and Construct the Hanford*  
8                   *Waste Treatment Plant*

9       65. The Bechtel-DOE Contract is a cost-plus award-fee Contract.  
10 Under this type of contract, DOE reimburses the contractor for costs  
11 expended and pays the contractor for meeting defined incentives and  
12 milestones.

13       66. The Bechtel-DOE Contract provides Bechtel three sources of  
14 revenue.

15       67. First, Bechtel earns a baseline fee as the contractor for the WTP  
16 project. This fee is earned regardless of the adequacy of the work  
17 performed by Bechtel and is known as the fee for “just being there.”

18       68. Second, Bechtel earns revenue from the 20-40% added by  
19 Bechtel to every hour of labor billed to the United States.

20       69. Third, Bechtel earns fee by completing incentive fee activities,  
21 milestones, and performance measures.

1       70. Bechtel submits bi-monthly invoices to both the ORP  
2 Contracting Officer and the Contracting Officer Representative, who is a  
3 representative of the ORP Manager.

4       71. In all of Bechtel's billings, it must include supporting  
5 documentation with each invoice. Supporting documentation includes a  
6 summary of charges, payroll schedule, overhead schedule, general and  
7 administrative schedule, other direct cost schedule, payroll details,  
8 subcontractor invoices with supporting documents and any other  
9 specialized schedules required by a specific project within the contract. A  
10 proper invoice must also include the description, quantity, unit of measure,  
11 unit price, and extended price of supplies delivered or services performed.

12       72. In addition to the earnings made as a percentage of labor costs,  
13 Bechtel earns revenue from incentive fees, including awards for completing  
14 activity and facility milestones and bi-annual awards for Project  
15 Management and Cost Incentives.

16       73. The Project Management incentive evaluates subjective and  
17 objective aspects of Bechtel's performance during the previous period. The  
18 Cost Incentive fee is earned when the actual costs of the prior period is  
19 equal to or less than the estimated contract costs.

20       74. Except for the bi-annual awards for Project Management and  
21 Cost Incentives, when Bechtel believes an incentive fee activity has been

1 met, it notifies the ORP Contracting Officer in writing who 1) makes a  
2 determination whether the requirements of the Contract have been met, 2)  
3 makes a determination of whether fee is earned, and 3) notifies Bechtel of  
4 its determinations within thirty (30) calendar days after receipt by the ORP  
5 Contracting Officer of Bechtel's notification. If the ORP Contracting Officer  
6 determines a fee has been earned, then Bechtel includes it on its next bi-  
7 monthly invoice.

8 75. The deliverables identified in the Bechtel-DOE Contract are  
9 rooted in the functional requirements found in the Bechtel-DOE Contract.  
10 The requirements include, among others:

11 a. Have a forty (40)-year operating life for the operating  
12 facilities (PT, HLW, LAW), Analytical Laboratory, and BOF exclusive  
13 of ancillary facilities.

14 b. Separately receive and store LAW and HLW streams  
15 from the Tank Farm in appropriately designed vessels.

16 c. Treat and immobilize LAW stream.

17 d. Implement the processes for solids washing, caustic  
18 leaching, and oxidative leaching of the HLW stream and immobilize  
19 the HLW feed and radionuclides separated from the LAW feed.

1                   e. Comply with applicable Federal, State, and local  
2 requirements, including environmental permits and other regulatory  
3 approvals and authorizations.

4       76. Bechtel's contract with DOE is an "EPCC" project or  
5 "engineering, procurement, construction, and commission" project. As the  
6 prime contractor, Bechtel is responsible for all aspects of the project  
7 including the initial startup. By having this contractually enumerated  
8 responsibility, Bechtel is the design authority and the design agent.

9       77. The design authority is the organization responsible for  
10 establishing and approving the design basis as defined by the contract,  
11 safety documents, applicable laws, codes, and standards.

12       78. In this role, the organization is responsible for design control  
13 and the ultimate technical adequacy of the design process. These  
14 responsibilities are applicable whether the process is conducted fully in-  
15 house, partially contracted to outside organizations, or fully contracted to  
16 outside organizations.

17       79. The design authority may delegate design work, but not its  
18 responsibilities.

19       80. The design agent is the organization responsible for  
20 development of the design, including the analysis and calculations to  
21 support the design, and for establishing engineering deliverables for

1 design implementation. The design agent determines how and when a  
2 design will be done, and the design agent performs design activities at the  
3 direction of and under the responsibility of the design authority.

4       81. Design interfaces between the design authority and design  
5 agent must be identified and controlled, and design efforts coordinated  
6 among and within participating organizations. Interface controls between  
7 the design authority and the design agent are necessary, even where the  
8 design agent is within the same organization as the design authority. The  
9 level of control necessary is dependent on the size of the organization; the  
10 larger the organization, the greater the need for procedural controls. In  
11 large matrixed organizations, support from other groups should be  
12 handled formally through specifications, requisitions, and work control—  
13 i.e., the design authority treats these matrixed organizations as outside  
14 vendors.

15       82. By being both the design authority and design agent, Bechtel  
16 determines what needs to be done and how and when it will be done.

17       83. The Bechtel-DOE Contract identifies Bechtel as the design  
18 authority and design agent, providing that Bechtel:

19           shall have authority and responsibility to ensure that: (i) the  
20           design of the WTP facilities comply with all requirements in the  
21           contract, and design requirements identified in approved

1 deliverables and work products specified in C.6 through C.9 of  
2 this contract. (ii) The planned operation of the WTP can achieve  
3 the capacity requirements specified in section C.6, Standard 5,  
4 Commissioning. (iii) The Contractor shall identify, quantify,  
5 and manage process and facility equipment sizing, technical  
6 operation performance, environmental permitting and the  
7 safety authorization basis to achieve the Contract Specified  
8 requirement of the WTP.

9 84. To fulfill its responsibility as design authority and agent,  
10 Bechtel has established various EPCC project departments. The main  
11 project departments are Research & Technology; Design Engineering;  
12 Construction, Procurement & Acceptance; Environmental and Nuclear  
13 Safety; Operations; Project Controls; and Project Management.

14 a. The Research & Technology (R&T) group is  
15 responsible for demonstrating the performance of selected designs  
16 and resolving technical design issues. The Bechtel-DOE Contract  
17 requires testing by R&T to (1) characterize the LAW and HLW feeds;  
18 (2) validate the capability of Pretreatment to meet contract  
19 requirements, operating requirements, operating limits, and plant  
20 throughput requirements; (3) determine the appropriate operating  
21 conditions for the LAW and HLW melters; (4) demonstrate that

1       immobilized LAW and HLW glasses meet contract requirements; (5)  
2       design and provide operational processes for oxidative leaching; and,  
3       among other things, (6) confirm vessel mixing. R&T is also required  
4       to develop and use analytical modes to predict and evaluate WTP  
5       performance.

6                 b.       The Design Engineering group is responsible for the  
7       design of the Hanford WTP, including the basis of design. Separate  
8       sub-groups within the design engineering group focus on specific  
9       areas of the plant: Pretreatment, LAW vitrification, HLW vitrification,  
10      the laboratory, and the support systems. The Bechtel-DOE Contract  
11      establishes numerous requirements for the development of the WTP  
12      design and the design itself.

13                 c.       The Construction, Procurement & Acceptance  
14      group is charged with procuring all required materials; constructing  
15      or managing the construction of the required systems, components,  
16      equipment, etc., inspecting and testing, and “ensur[ing] that work  
17      performed under the Contract conforms to the Contract.”

18                 d.       The Environmental & Nuclear Safety group (E&NS)  
19      is responsible for establishing and maintaining the required  
20      regulatory permits and safety documents, evaluating the WTP design  
21      and design changes, and project procedures for compliance with

1 environmental and safety regulations and regulatory requirements  
2 and notifying the project management group when designs or project  
3 procedures are noncompliant.

4 e. The Project Management group includes top  
5 managers from the other departments who are responsible for the  
6 major decisions and project direction.

7 f. The Project Controls group is responsible for  
8 maintaining cost and schedule performance records and overall  
9 project status.

10 g. The Operations group is responsible for the  
11 transition from construction to commissioning and ultimately the  
12 transition from an EPCC project to the operations contractor.

13 85. Under the Bechtel-DOE Contract, DOE is identified as the  
14 "Owner" and "Regulator" of the WTP. ORP takes on these roles for DOE.  
15 In its capacity as the owner, DOE establishes the requirements, administers  
16 the Contract, and confirms that the Contractor meets Contract  
17 requirements. As the regulator, "DOE will regulate radiological, nuclear,  
18 and process safety, as well as non-radiological worker safety and health."

19 86. The Bechtel-DOE Contract requires Bechtel to design and  
20 construct the WTP in precise and complete conformance with all of the  
21 requirements of the contract.

1       87. Specifically, pursuant to Section C of the Bechtel-DOE Contract,  
2 Bechtel is required to conform the Authorization Basis absent express,  
3 written approval from ORP. The Authorization Basis describes the safety  
4 and environmental requirements for the WTP and is the benchmark against  
5 which a proposed change to the facility—e.g. procedures, programs, plans,  
6 or management processes—is evaluated for potential safety and regulatory  
7 implications.

8       88. This duty to conform to the Contract and Authorization Basis is  
9 non-delegable.

10      89. If Bechtel chooses to hire subcontractors to perform any part of  
11 its contract with the United States, the Bechtel-DOE Contract requires  
12 Bechtel to “flowdown” those quality requirements to subcontractors.

13      90. Bechtel nonetheless remains obligated to the United States to  
14 provide an end item which conforms in all respects to the requirements of  
15 the contract.

16           **B. TESTING IN RESPONSE TO ISSUES RAISED BY THE 2006**  
17           **EXTERNAL FLOWSHEET REVIEW TEAM VIOLATED**  
18           **REQUIREMENTS**

19      91. In 2005, the then Secretary of Energy, Samuel Bodman,  
20 chartered two studies to address concerns that technical issues in the  
21 design of the Hanford WTP would raise costs and delay operations. The

1 first study analyzed these technical issues, and the second study evaluated  
2 and determined cost and schedule estimates, relying on the data gathered  
3 in the first study.

4 92. Relator Tamosaitis led the first study, titled "External  
5 Flowsheet Review." The main consultant team for this study, known as the  
6 External Flowsheet Review Team (EFRT), was comprised of three sub-  
7 teams and over 51 consultants. Because of the participation of world-  
8 renowned experts and professors, the EFRT became colloquially known as  
9 the "Best and Brightest" team.

10 93. The general focus of the EFRT was WTP throughput—the  
11 ability of the WTP design to process the chemical nuclear wastes. This  
12 required determining: (1) the existence of major issues that would prevent  
13 operations; (2) the existence of major issues that would prevent the  
14 contractually specified process rates for immobilizing the chemical nuclear  
15 waste; (3) the existence of potential issues that would adversely affect these  
16 contractually specified process rates.

17 94. In a February of 2006 report, the EFRT identified 28 technical  
18 issues that they believed had to be addressed to achieve operations. The  
19 EFRT classified 17 of the issues as major, identified as M1 – M17, and 11 as  
20 potential, similarly identified as P1 – P11. The numbering scheme on these  
21 issues does not correspond to an order of importance.

1       95. For each issue, after multiple prompts from ORP, Bechtel  
2 subsequently developed an Issue Response Plan, which described the  
3 planned measures for resolution and the required criteria for formal  
4 closure of the issue.

5       96. The Issue Response Plans were reviewed and concurred with  
6 by ORP, Bechtel technical and project management, and a lead EFRT  
7 member.

8       97. Closure of the EFRT issues was determined by a team  
9 identified as the Technology Steering Group. Eight members comprised  
10 this team: the WTP Project Managers from ORP and Bechtel, three ORP  
11 officials, and three Bechtel upper-management.

12       98. To obtain issue closure required approval by WTP Project  
13 Managers from ORP and Bechtel and concurrence from the remaining six  
14 members.

15       99. During the Technical Steering Group's tenure, the WTP Project  
16 Manager for ORP changed from John Eschenberg to Guy Girard to lastly  
17 Dale Knutson in May of 2010.

18       100. Likewise, the WTP Project Manager for Bechtel changed from  
19 Bill Elkins to Ted Feigenbaum to Frank Russo in December of 2009.

1       101. Upon information and belief, Feigenbaum was removed  
2 because Ines Triay did not like him on a personal basis and preferred Frank  
3 Russo based on their prior close working relationships.

4       102. The remaining six members did not change: Relator Gary  
5 Brunson (ORP), Don Alexander (ORP), Langdon Holton (ORP), Richard  
6 Edwards (Bechtel), Craig Myler (Bechtel), and Greg Ashley (Bechtel).

7       103. Resolution of all EFRT issues was required to be completed by  
8 December 31, 2010 pursuant to the Tri-Party Consent Decree.

9       104. Ines Triay, Assistant Secretary to DOE, and Shirley Olinger,  
10 ORP Site Manager, expressed that failing to resolve these issues within the  
11 allotted timeframe would threaten their position and cause a reduction in  
12 federal funding.

13       105. To incentivize closure, ORP tied closure of the EFRT issues to  
14 80% of the 2010-A cost incentive award. Only if Bechtel closed all EFRT  
15 issues by June 30, 2010 would Bechtel receive 80% of the award. In  
16 addition, ORP tied closure of a specific issue, M12, to a milestone award of  
17 \$ 3.75 million.

18       106. Bechtel manipulated testing criteria and intimidated those who  
19 disagreed in order to claim closure of EFRT issues and to obtain incentive  
20 and milestone payments from the government.

1       107. In falsely closing EFRT issues, Bechtel likewise knowingly  
2 billed the government for testing and simulants that did not meet  
3 contractual requirements.

4           1. *Inadequate Mixing in Vessels (M3)*

5       108. The waste to be treated by the Hanford WTP is not a  
6 homogeneous liquid. The Hanford waste is slurry: a mixture of Newtonian  
7 and non-Newtonian liquids and insoluble solid particles of wide ranging  
8 sizes and densities. Both the solid particles and liquids have unique  
9 physical and chemical properties that affect the speed at which the solid  
10 particles settle in the pipes and vessels.

11       109. The characteristics of the liquids and solids contained in the  
12 waste, including solubility, are functions of their content, chemical  
13 constituents, viscosity, shear stress, particle size distribution and density,  
14 among others. These characteristics are not constant throughout the  
15 treatment process.

16       110. The viscosity of Newtonian fluids, common examples include  
17 water or oil, is constant and only affected by temperature while the  
18 viscosity of non-Newtonian fluids, such as ketchup, is dependent on some  
19 mechanical variable, such as shear stress (movement), time, and  
20 temperature.

1       111. Added to the complications of dealing with non-Newtonian  
2 fluids is the fact that the slurries contain many solid particles of various  
3 shapes, sizes and composition.

4       112. The slurries must be adequately mixed on a constant basis to  
5 ensure appropriate sampling results, release of hydrogen, and to prevent  
6 solids from accumulating on the bottom of tanks and pipes.

7       113. Any accumulation of solids can trap explosive hydrogen gas or  
8 cause unsafe accumulation of fissile material (e.g. plutonium), which could  
9 lead to a criticality event.

10      114. These complications and difficult issues are not new or unique  
11 to Hanford, have been resolved successfully at other vitrification and  
12 nuclear processing facilities, and were known to Bechtel prior to  
13 contracting with DOE to design and build the WTP.

14      115. The problems with mixing were known to both ORP and  
15 Bechtel back in the mid 1990s prior to executing the contract in 2000 for  
16 Bechtel to design and build the WTP. Prior to Bechtel, BNFL's design of  
17 the WTP included extensive use of fluidic devices to mix, transfer and  
18 sample waste.

19      116. In early to mid 2000, BNFL produced several reports providing  
20 rheological data for much of the tank waste to be treated by the WTP. This  
21

1 data was based on testing performed by Pacific Northwest National  
2 Laboratory (PNNL).

3       117. The Bechtel-DOE Contract, executed later that year, references  
4 these rheological reports, indicating Bechtel's knowledge of the non-  
5 Newtonian characteristics of the waste slurries, as well as the wide ranging  
6 particle sizes contained therein.

7       118. Despite this knowledge, Bechtel waited until the following year  
8 before reporting the inadequacy of the mixing design, which Bechtel  
9 adopted from BNFL.

10      119. In 2002, Bechtel requested an increase in the target cost and cost  
11 performance fee due to the need for additional mixing testing for the  
12 fluidic devices, called pulse jet mixers (PJM)s.

13      120. The PJM is used to mix process fluids in selected process  
14 vessels located in pretreatment and high level waste facilities' black cells.  
15 The PJM concept was based on previous applications at the Sellafield site  
16 in the United Kingdom. The PJM itself is a long cylindrical vessel that  
17 draws in fluid by a vacuum and then pressurizes to eject the fluid to cause  
18 mixing, much like a baster draws in and expels fluid.

19      121. In June 2003, Bechtel authorized work on an integrated strategy  
20 for scaled testing to validate PJM mixing of non-Newtonian fluids in WTP  
21 vessels. This integrated strategy employed non-Newtonian simulants in

1 both full scale and part scale PJM-equipped vessel configurations to  
2 empirically determine and validate the PJM design.

3       122. Despite realizing the need for this type of testing at the time of  
4 signing the contract with DOE, Bechtel considered the new testing a change  
5 in contract scope and requested an equitable adjustment to the contract.

6       123. DOE denied Bechtel's request.

7       124. By November 2003, Bechtel determined that design changes to  
8 the PJMs could optimize their performance, including changes to PJM  
9 vessel configuration, nozzle design, and air supply. Bechtel subsequently  
10 determined that the PJM could not mix slurry as is and that changes to the  
11 rheology of the incoming slurry and air sparging were required to achieve  
12 the necessary mixing.

13       125. In 2006, the EFRT identified vessel mixing, known as M3, as a  
14 major issue. Specifically, EFRT raised concerns about the mixing of  
15 Newtonian and non-Newtonian fluids in the vessels.

16       126. Resolving M3 meant that Bechtel would have to provide the  
17 technical basis to underpin the pulsed jet mixers, including vessel  
18 operating mode, mixing requirements, feed limits, and physical design.

19       127. Through a combination of testing and analysis, resolution of  
20 M3 required the demonstration of the adequacy of the final design and  
21 operating envelope to an acceptable level of technical maturity.

1       128. To achieve formal closure of M3 required Bechtel to meet  
2 established criteria, including:

- 3           a.           Conducting computational fluid dynamics analysis  
4                   and validation/benchmarking for PJM mixing;
- 5           b.           Specification of testing simulant compositions and  
6                   characteristics based on engineering definition of waste feeds to be  
7                   simulated;
- 8           c.           Procuring and executing testing activities based on  
9                   technical test plans, and ensuring that the technical testing activities  
10                  comply with testing requirements and achieve testing objectives; and
- 11           d.           Assessment of the PJM vessel design against the  
12                  mixing requirements.

13       129. The first version of the M3 Issue Response Plan was issued in  
14 August 2006. As early as January 2007, Bechtel performed pulse jet mixer  
15 computational fluid dynamics (CFD) testing. The CFD testing showed  
16 failure of mixing in most vessels due to the rheological properties of the  
17 waste slurry previously identified in the 2000 PNNL testing.

18       130. In March 2007, testing performed by British Hydraulic Research  
19 Group Methodology predicted inadequacies and marginal performance of  
20 vessel mixing with accumulation of high solid concentrations, again, due to  
21

1 the rheological properties of the waste slurry previously identified in the  
2 2000 PNNL testing.

3 131. This testing was not performed in accordance with NQA-1  
4 standard.

5 132. Despite these problems, Bechtel's April 2007 progress report  
6 found that M3 was well thought out and likely to be successful.

7 133. A month after the "successful" EFRT report, Bechtel requested  
8 additional funds from the United States to increase pulse jet mixer nozzle  
9 size and pulse jet velocity in several of the vessels. Bechtel had not tested  
10 the design changes prior to requesting the additional funds.

11 134. ORP approved the request, but the design changes were never  
12 implemented and the money was spent elsewhere.

13 135. In June 2007, Bechtel issued Revision 2 of the M3 Issue  
14 Response Plan and requested additional funds for M3 testing. Bechtel's  
15 justification was the poor results from Bechtel's CFD testing and testing by  
16 British Hydraulic, both of which were due to the rheological properties of  
17 the waste slurry identified by PNNL in 2000.

18 136. After receiving additional funds to increase PJM nozzle size  
19 and PJM velocity, Bechtel decided to test whether increasing nozzle size  
20 and velocity would provide significant improvement.  
21

1       137. In late 2007 due to problems with procurements, PNNL was  
2 unable to conduct M3 Phase 1 scaled testing. Bechtel instructed PNNL to  
3 test using an ad hoc test stand; however, procurement delays prevented  
4 PNNL from testing.

5       138. In March of 2008, Bechtel was able to ease the mixing  
6 requirements for most of the vessels through the Technical Maturation  
7 Plan. Bechtel instructed PNNL to begin testing using the lowered criteria,  
8 an ad hoc test stand, and five-part water simulant unrepresentative of the  
9 rheological properties of the waste.

10      139. Upon information and belief, testing using the ad hoc test  
11 stand, including the simulant used by PNNL during the testing, failed to  
12 conform to NQA-1.

13      140. In early 2008, Bechtel requested an equitable adjustment to  
14 remove the requirement to increase PJM nozzle size and PJM velocity,  
15 justifying that the requirement was too expensive despite having been paid  
16 to add both features.

17      141. After numerous delays, proposed changes to M3 closure  
18 criteria and arguments over appropriate testing, the Phase 1 test report on  
19 M3 was issued by PNNL in May 2009.

1       142. Even with the reduced mixing requirements, these and other  
2 prototypic test results issued through October 2009 proved to be non-  
3 confirmatory.

4       143. Even if the test results had been confirmatory, the results  
5 would be indeterminate because the testing performed failed to conform to  
6 NQA-1 requirements.

7       144. Bechtel then endorsed a Phase II mixing program, which was  
8 conducted at Washington State University and a local contractor, Mid  
9 Columbia Engineering. This phase II program did not meet NQA-1  
10 requirements.

11       145. In or about June 2009, Relator Tamosaitis asked his supervisor,  
12 Richard Edwards, to assign the M3 program to R&T so it could be  
13 completed with the assistance and support of PNNL.

14       146. Edwards told Relator Tamosaitis that this would not be done  
15 due to costs, paper work, and the NQA-1 requirements associated with  
16 doing test programs under R&T and through PNNL.

17       147. In September of 2009, Bechtel decided M3 closure strategy  
18 needed to be re-planned to add significant new resources to the M3 team.  
19 Relator Tamosaitis was designated the program lead.

20       148. In November 2009, the Defense Nuclear Facilities Safety Board  
21 (DNFSB), an independent body responsible for nuclear safety oversight

1 authority of DOE and its activities related to the WTP, issued a report  
2 regarding the status of Bechtel's efforts to bring M3 to closure.

3       149. The DNFSB identified potential safety concerns with WTP  
4 mixing, including (1) the potential for a credible inadvertent criticality  
5 scenario; (2) retention of flammable gasses trapped in the sediment layer in  
6 an amount beyond that assumed in the safety basis; and (3) degradation in  
7 level-detection performance, which could result in an excessive number of  
8 pulse jet mixer overblows that could lead to the structural failure of vessel  
9 components.

10       150. In this report, the DNFSB also found that Bechtel's issue  
11 response plan for M3 had "undergone multiple revisions driven by  
12 technical challenges" and that one reason for the difficulty in addressing  
13 the issue was "that the mixing and transport systems were designed for  
14 average rather than bounding values of particle density in the Hanford  
15 waste inventory."

16       151. Despite knowing the rheological properties of the slurry waste  
17 since the 2000 PNNL report, and despite knowing that "pulse jet mixers  
18 lack the required power to sufficiently suspend and transport a significant  
19 fraction of the most rapidly settling particles through the plant," Bechtel  
20 planned to close M3 using scaled-down experiments and CFD testing that  
21 had previously proven unsuccessful.

1       152. By January of 2010, it was evident to Bechtel that mixing would  
2 not be resolved if Bechtel were to use a simulant that accurately  
3 represented the WTP waste stream.

4       153. During this time, Frank Russo arrived and replaced Ted  
5 Feigenbaum as Bechtel Project Director for the WTP. Russo, with input  
6 from Greg Ashley, determined that the plan proposed by Relator  
7 Tamosaitis would increase costs and highlight design shortfalls.

8       154. Russo also changed the organization structure so that both M3  
9 team and Engineering reported to him, giving Russo complete control over  
10 the resolution of M3.

11       155. Bechtel continued to perform scaled testing using simulants  
12 Bechtel knew to be insufficient and noncompliant with contractual  
13 requirements.

14       156. The simulants selected by Bechtel failed to represent the  
15 rheological and chemical characteristics of the slurry waste.

16       157. Despite knowing the simulants to be inadequate  
17 representations of actual waste, Bechtel selected the simulants to save  
18 money, maintain schedule, and ensure the testing confirmed the design  
19 basis.

20       158. Relator Tamosaitis agreed that the simulant used in M3 testing  
21 was not representative of actual slurry waste.

1       159. In or about March of 2010, ORP decided to tie 80% of the  
2 performance incentive fee to completion of the EFRT issues, namely,  
3 completion of M3, by June 30, 2010.

4       160. In addition to the incentive fee, Frank Russo was motivated to  
5 close M3 in order to obtain an additional \$50 million in funding.

6       161. Because Bechtel knew it could not achieve successful results  
7 with non-representative simulant, much less a simulant that mimicked the  
8 rheological properties of the slurry waste, Frank Russo decided to rely on a  
9 previously unconsidered strategy to address mixing issues, called heel  
10 removal, which the Savannah River National Laboratory (SRNL)  
11 recognized as “not a good idea.”

12       162. Heel removal is the process of removing settled particles that  
13 collect on the bottom of a vessel. This process is in lieu of trying to  
14 continuously keep the particles suspended off the bottom of the vessel.

15       163. In a meeting on April 14, 2010, Russo told Greg Ashley and  
16 other Bechtel and ORP employees, including Relator Brunson, something  
17 to the effect that the failure to close M3 could shut down the project, and  
18 the senators from Washington State were “our friends” and losing the \$50  
19 million would cost them political clout. Russo inquired of the group  
20 whether M3 could be closed by June 30, 2010, to which Relator Brunson  
21 replied that closure was dependent on the quality of the evidence

1 presented. Russo snapped back that “everyone in this room’s reputation is  
2 on the line.”

3       164. Following this meeting, Russo intimidated those that did not  
4 agree with his new heel removal strategy with no additional testing, and  
5 Ines Triay, assistant Secretary of DOE Environmental Management,  
6 encouraged such behavior.

7       165. In an email between Russo and Ines Triay, assistant Secretary of  
8 DOE Environmental Management, Triay asked whether Russo was able to  
9 convince others at WTP of the heel removal strategy. Russo responded:

10      It was like herding cats. Scientists that were diametrically  
11 opposed at the beginning of the meeting were in lock step  
12 harmony when we told them the science is ending. They all  
13 hated it ... **I told them and the entire room that their job now**  
14 **is to give me/Guy and then you [Triay] a well developed and**  
15 **balanced business case that talks to tank by tank capability ...**  
16 Tomorrow I will remind ORP and my folks and will do the  
17 same Thursday. **Guy will keep ORP and DOE consultants in**  
18 **line, I will help and I will send anyone on my team home if**  
19 **they demonstrate an unwillingness or inability to fulfill my**  
20 **direction ... Re the non Newtonian tanks...no new tests. The**

1 recommended position which the majority already agrees is  
2 non Newtonian tanks is acceptable as is.

3 166. Frank Russo summarized his unilateral plan to close M3 using  
4 heel removal in an email dated April 22, 2010:

5 Bechtel is confident that the heel removal will close this issue,  
6 because there is no concern that it won't work. This is proven  
7 technology. While we are backing up the heel removal with  
8 testing, we believe that it will take months to agree on test  
9 simulant and test process. Any change in non Newtonian  
10 arrays will challenge all previous non Newtonian testing. So  
11 add another series of non Newtonian tests. If not heel removal,  
12 I continue to believe that we will lose many more months than  
13 are available. No way would I commit to July of 2010. This is  
14 very sad news as I am at a loss for a solution other than heel  
15 removal.

16 167. Despite being sure that "heel removal will close" M3, Bechtel  
17 continued to test, using simulants unrepresentative of the wastes, in  
18 violation of NQA-1.

19 168. To ensure closure of M3, Russo pressured PNNL and SRNL to  
20 endorse heel removal as a resolution to the mixing problems.  
21

1       169. Frank Russo noted in emails that he would have the confidence  
2 of SRNL because Paul Deason, the director at SRNL, had previously  
3 reported to Russo at another project. Out of precaution, Russo demanded  
4 to “put Rich or Russ on a plane to SRNL to help them get in alignment.”

5       170. SRNL issued a report stating that no additional testing was  
6 needed. William Wilmarth, Ph.D. of SRNL subsequently admitted that he  
7 was afraid “[he] would lose [his] fingers and toes” had he stated testing  
8 was needed.

9       171. PNNL refused to approve of heel removal.

10      172. Dae Chung of DOE recognized PNNL’s lack of approval as a  
11 serious concern and repeatedly inquired of Frank Russo regarding whether  
12 PNNL would approve M3 closure, stating “[h]ave you made the case for  
13 M3 with sufficient endorsement from PNNL?”

14      173. Russo responded, “PNNL is not on the team. I have met with  
15 Knudson [sic] on this obvious absence and I have a meeting scheduled  
16 with Mike Kluse [PNNL] today to ensure that PNNL understands that we  
17 now need to benefit of the 10 years of study and \$200 million of  
18 intellectual investment that we have made with this local national lab.”

19      174. In another email dated May 24, 2010, Russo similarly stated  
20 “PNNL is running to the hills after 200 million to Battelle and PNNL for  
21 research,” and that he needed to “calibrate” the head of Battelle.

1       175. As a member of the Technology Steering Group, Relator  
2 Brunson refused to close M3, especially the non-Newtonian vessels,  
3 without execution of testing.

4       176. When Relator Brunson rejected Frank Russo's proposed  
5 solution of the untested heel removal and additional non-Newtonian  
6 testing with heavy particles, Dae Chung (DOE), in a meeting on May 6,  
7 2010, told Relator Brunson that he should be fired for failing to close M3.

8       177. In this same meeting, Greg Ashley informed Chung that  
9 Bechtel would sign as the design authority in order to close the non-  
10 Newtonian vessels, to which Chung replied "the fact that the design  
11 authority would sign meant a great deal to him."

12       178. Brunson stated that he could not concur and discussion ensued  
13 about removing him as a signatory for the Technical Steering Group.

14       179. Subsequently, Gary Brunson and other ORP employees were  
15 criticized by Shirley Olinger for issuing too many comments on Bechtel  
16 designs. She stated that comments would not be viewed as "official" and  
17 Bechtel would not have to respond to each comment.

18       180. On May 25, 2010, Olinger approached Relator Brunson in his  
19 office to discuss, among other things, changing the M3 closure criteria to  
20 eliminate ORP sign off. Relator Brunson did not respond.

1       181. M3 was declared closed on June 30, 2010 without PNNL  
2 approval and without resolution or resolution of the non-Newtonian  
3 vessels. Although the TSG approved closure of Newtonian vessels, Bechtel  
4 justified the closure to DOE by incorporating an unproven, untested  
5 method of removing settled particles through heel removal.

6       182. Bechtel later determined heel removal to be impossible and  
7 redefined "heel removal" to "heel management" which would allow an  
8 amount of heel to be left in the vessels. Heel management is not  
9 authorized by the Bechtel-DOE Contract.

10      183. On June 30, 2010, having deemed M3 and resolution of the  
11 mixing issue a success, Russo proudly emailed WTP employees "Now on  
12 to the next phase ... let's get it designed and built and into operation."  
13 However, in Bechtel's August 2010 monthly status report to ORP, Bechtel  
14 claimed the WTP to be approximately 82% designed and 53% constructed.

15      184. The next day, in an email to Bechtel management, Russo noted  
16 that he had argued to Dale Knutson and Shirley Olinger that, if M3 was not  
17 closed, federal funding, including the \$50 million "accelerated" funds,  
18 would be in "major peril":

19           I already made the argument to Dale and Shirley that they  
20 would be absolutely crazy to not accept that we are finished  
21 with M-3. Congress is just looking for a reason to put

1       Hanford money in other States .... our \$50 million is still in  
2       play. Declare failure and high probability that the \$50 mil  
3       goes away. \$50 mil goes away ..... 12.263 and 2019 are in  
4       major peril ..... major peril ... This all said, I repeat, they are  
5       DOE ..... and they often do things that make no basic sense.  
6       (original ellipses).

7       185. Also on July 1, 2010, Robert French, the Bechtel M3 closure  
8       manager, emailed the M3 technical group, stating that the words "M3  
9       testing" should no longer be used in any communications going forward.

10      186. By August of 2010, the non-Newtonian mixing issues were still  
11     open, and on August 13, 2010, Dale Knutson told Relator Brunson that he  
12     wanted closure by August 20, 2010.

13      187. Following significant ORP pressure, the non-Newtonian mixing  
14     issue was formally concurred on by the Technology Steering Group (with  
15     one ORP member dissenting) and closed by Bechtel on August 22, 2010.  
16     Closure was contingent on major remedial actions required of Bechtel  
17     subsequent to closure.

18      188. After M3 issue was "closed," the Bechtel contract was amended  
19     to include resolution of the still existent mixing problems, including large  
20     scale integrated testing. Bechtel received additional funds to conduct this  
21     testing.

1       189. As a result of M3 testing, Bechtel made substantial design  
2 modifications to vessels, pulse jet mixers, venting systems, and other  
3 systems, structures, and components (SSCs).

4       190. Despite the clear existence of mixing issues after June 30, 2010,  
5 Bechtel pressured PNNL and other WTP employees to support closure of  
6 M3 so Bechtel could obtain incentive payment. As a result, Bechtel  
7 knowingly falsely certified closure of M3 and obtained incentive fee  
8 payment of approximately \$3.8 million and \$45 million in accelerated  
9 funding.

10       191. Further, in failing to comply with NQA-1 testing requirements,  
11 the resulting testing data is indeterminate and cannot be used to support  
12 design. As a result, Bechtel knowingly, or with reckless disregard,  
13 submitted false statements and records material to claim for payment of  
14 costs associated with M3.

15       192. Bechtel has claimed over \$150 million in costs associated with  
16 M3; further, the cost to the United States to retest and reevaluate design  
17 modifications, and if necessary, undo modifications, would be massive and  
18 would have a detrimental impact on the ability of DOE to meet its  
19 obligations under the Tri-Party Consent Decree.

1                   **2. Undemonstrated Leaching Process (M12)**

2         193. The EFRT identified two major concerns with the combined  
3 ultrafiltration and leaching process performance related directly to the  
4 limited WTP project experience and experimental data on the performance  
5 of this key unit operation.

6         194. The EFRT was concerned that PT would not achieve its design  
7 basis permeate flux rates due to the significantly lower rates measured in  
8 certain waste samples. Furthermore, EFRT questioned the adequacy of the  
9 mixing system to blend the leaching/washing solutions with the bulk of  
10 the wastes.

11         195. To resolve these issues, the EFRT recommended the following:

12                 a. Increasing the ultrafiltration surface area,  
13 evaluating the use of asymmetrical type filter tubes, and additional  
14 testing of the filter back-pulsing frequency to better optimize the  
15 overall performance; and

16                 b. Conducting a combined ultrafiltration/leaching  
17 system test of all leaching, washing and filtration scenarios at  
18 sufficient scale to demonstrate the effectiveness of the design and the  
19 adequacy of the mixing system.

20         196. M12 addresses the second of these recommendations, which  
21 involves conducting large scale testing of the combined

1 ultrafiltration/leaching system to demonstrate its expected performance as  
2 well as further evaluate filter back-pulsing and cleaning operations.

3       197. The criteria required to be completed to close M12 included the  
4 following:

5           a. Develop and validate initial single component  
6           simulants for boehmite, gibbsite, chrome, phosphate, sodium, sulfate  
7           and filtration that can be used in laboratory and integrated  
8           demonstration;

9           b. Test laboratory scale systems to obtain actual waste  
10          sample data and validate simulant composition and provide  
11          additional laboratory scale simulant studies to expand operating  
12          basis; and

13           c. Perform integrated demonstration to confirm  
14          ultrafiltration process system design and sludge treatment process.

15       198. The testing performed under M12 failed to comply with NQA-1  
16 requirements. For example, the simulant developed failed to maintain  
17 traceability requirements and the developed testing platform failed to  
18 apply all aspects of NQA-1 during construction.

19       199. Bechtel performed scaled testing using simulants Bechtel knew  
20 to be insufficient and noncompliant with contractual requirements.

1       200. The simulants selected by Bechtel failed to represent the  
2 rheological and chemical characteristics of the slurry waste.

3       201. Despite knowing the simulants to be inadequate  
4 representations of actual waste, Bechtel selected the simulants to save  
5 money, maintain schedule, and ensure the testing confirmed the design  
6 basis.

7       202. Relator Tamosaitis agreed that the simulant used in M12 testing  
8 was not representative of actual slurry waste.

9       203. Bechtel management told Relator Tamosaitis that testing  
10 performed offsite did not need to comply with NQA-1 requirements.

11      204. This is not true; all testing is required to comply with NQA-1  
12 requirements.

13      205. Further, in a conversation between Relator Busche and Suzanne  
14 Heaston, WTP communications manager for Bechtel, on or about January  
15 11, 2013, Heaston confirmed that M12 testing failed to comply with NQA-1  
16 requirements. Relator Busche and Heaston were discussing Relator  
17 Busche's inability to use entrainment coefficient data from M12 testing due  
18 to noncompliance with NQA-1. Heaston noted that Bechtel had decided to  
19 forego NQA-1 compliance in M12 testing to save money.

1       206. Despite failing to comply with NQA-1 requirements, Bechtel  
2 falsely certified closure of M12 and obtained an milestone fee payment of  
3 approximately \$3.4 million.

4       207. Further, in failing to comply with NQA-1 testing requirements,  
5 the resulting testing data is indeterminate and cannot be used to support  
6 design. As a result, Bechtel knowingly, or with reckless disregard,  
7 submitted false statements and records material to claim payment of costs  
8 associated with M12.

9       208. Bechtel has claimed over \$110 million in costs associated with  
10 M12; further, the cost to the United States to retest and reevaluate the  
11 applications of the data gathered from the noncompliant testing would be  
12 massive and would have a detrimental impact on the ability of DOE to  
13 meet its obligations under the Tri-Party Consent Decree.

14           3. *Plugging in Process Piping (M1)*

15       209. Another issue identified by the EFRT was the plugging of pipes  
16 transporting the slurry waste.

17       210. Slurry mobility is key to process throughput and is thus one of  
18 the most important attributes for WTP operations. At the time of the  
19 EFRT's analysis, a large amount of 2, 3, and 4-inch piping had already been  
20 installed between the various WTP unit operations in construction. The  
21 EFRT concluded that "any line containing both solids and liquids can be

1 expected to plug and should be designed to prevent plugging for both  
2 rapidly settling and hindered-settling slurries."

3       211. The EFRT determined that Bechtel had not "consistently"  
4 designed the WTP to avoid the risk of line plugging, and although EFRT  
5 could not "quantify how severely process line plugging would affect Plant  
6 throughput," the EFRT anticipated that "some piping could plug within  
7 days to a few weeks."

8       212. To resolve M1, Bechtel assigned Scott Saunders to lead the M1  
9 team, and closure of M1 would be obtained upon the performance of the  
10 following activites:

11           a.      Issuance of a report documenting the design basis for  
12                  particulate size and density with support from Hanford waste  
13                  characteristic experts.

14           b.      Issuance of an interim Design Guide that specifies  
15                  minimum slurry flow velocity, pipe flushing velocity, and preferred  
16                  piping configuration.

17           c.      Evaluation of the WTP piping against the interim Design  
18                  Guide to identify necessary modifications.

19           d.      Issuance of a final Design Guide upon confirmation by  
20                  final particulate characterization and R&T test results.

1       213. To close M1, Bechtel confirmed this Design Guide by using  
2 simulants Bechtel knew to be insufficient and noncompliant with  
3 contractual requirements. Bechtel likewise used results from testing that  
4 did not conform to NQA-1.

5       214. The simulants selected by Bechtel failed to represent the  
6 rheological and chemical characteristics of the slurry waste.

7       215. Bechtel utilized a five-part water-based simulant containing  
8 particles of limited size and density. Despite knowing the simulants to be  
9 inadequate representations of actual waste, Bechtel selected the simulants  
10 to save money, maintain schedule, and ensure the testing confirmed the  
11 design basis.

12       216. Bechtel likewise refused to issue findings from Adam Poloski of  
13 PNNL that disagreed with Bechtel's analysis and solution to obtaining  
14 adequate pipeflows.

15       217. Bechtel confirmed the interim Design Guide and issued a final  
16 Design Guide based on the noncompliant testing.

17       218. Despite failing to comply with contractual requirements for  
18 simulants and NQA-1 requirements for testing, Bechtel falsely certified  
19 closure of M1.

20       219. Further, in failing to comply with NQA-1 requirements for  
21 testing, the resulting testing data is indeterminate and cannot be used to

support design. As a result, Bechtel knowingly, or with reckless disregard,  
submitted made false statements and records material to claims for  
payment of costs associated with M1.

4        220. Bechtel has claimed over \$14 million in costs associated with  
5 M1; further, the cost to the United States to retest and reevaluate the  
6 Design Guide and modify impacted designs and SSCs would be massive  
7 and would have a detrimental impact on the ability of DOE to meet its  
8 obligations under the Tri-Party Consent Decree.

#### **4. Process Operating Limits Not Completely Defined & Gelation/Precipitation During Leaching (M6/P4)**

11        221. The EFRT concluded that many of the process operating limits  
12 of the WTP unit operations had not yet been determined. Process  
13 operating limits are the thresholds of parameters such as temperature,  
14 flowrate, pH, pressure, viscosity and other important factors that affect the  
15 performance of each process operation.

16           222. The EFRT determined that WTP needed to prepare  
17 documentation that described the operating behavior of the WTP as a  
18 function of feed characteristics, system operating strategies and the above  
19 process operating limits.

20        223. The EFRT determined that some of the feeds to the leaching  
21 operation would contain significant amounts of aluminum and other

1 materials that could precipitate, and if conditions proved unfavorable,  
2 there existed the possibility that the aluminum could gel.

3       224. The EFRT recommended the performance of additional testing  
4 to expand the understanding of plant process capability and to define  
5 practical process operating limits for each unit operation.

6       225. The EFRT also recommended that Bechtel conduct scale-up  
7 testing of the leaching processes to ensure problematic gels/precipitates do  
8 not form and post-filtration precipitation does not occur.

9       226. To obtain closure over M6/P4, Bechtel was required to  
10 complete over ten activities in two distinct phases, including: "the  
11 evaluation and identification of the potential causes of chemical line  
12 plugging and gelation/precipitation in process lines" using R&T testing to  
13 "evaluate process chemistry associated with potential line plugging."

14       227. The testing performed under M6/P4 failed to comply with  
15 NQA-1 requirements. Bechtel performed testing using simulants Bechtel  
16 knew to be insufficient and noncompliant with contractual requirements.

17       228. The simulants selected by Bechtel failed to represent the  
18 rheological and chemical characteristics of the slurry waste.

19       229. Despite knowing the simulants to be inadequate  
20 representations of actual waste, Bechtel selected the simulants to save  
21

1 money, maintain schedule, and ensure the testing confirmed the design  
2 basis.

3 230. Despite failing to comply with NQA-1 requirements, Bechtel  
4 falsely certified closure of M6/P4.

5 231. Further, in failing to comply with NQA-1 testing requirements,  
6 the resulting testing data is indeterminate and cannot be used to support  
7 design. As a result, Bechtel knowingly, or with reckless disregard, made  
8 false statements and records material to claims for payment of costs  
9 associated with M6/P4.

10 232. Bechtel has claimed over \$15 million in costs associated with  
11 M6/P4; further, the cost to the United States to retest and reevaluate the  
12 applications of the data gathered from the noncompliant M6/P4 testing  
13 would be massive and would have a detrimental impact on the ability of  
14 DOE to meet its obligations under the Tri-Party Consent Decree.

15 **C. GOVERNMENT DOLLARS SPENT ON LOBBYING**

16 233. The Bechtel-DOE Contract prohibits Bechtel from using funds  
17 to influence Congress:

18 The Contractor agrees that none of the funds obligated on this  
19 award shall be expended, directly or indirectly, to influence  
20 Congressional action on any legislation or appropriation  
21 matters pending before Congress, other than to communicate to

1 Members of Congress as described in 18 United States Code  
2 (U.S.C.) 1913. This restriction is in addition to those prescribed  
3 elsewhere in statute and regulation.

4 234. Bechtel ignored this contract restriction, soliciting  
5 Congressional support, influencing budget appropriations, and increasing  
6 funding for the WTP project at Hanford.

7 235. E-mail communications between Bechtel employees,  
8 Congressional staffers, Senators, Representatives, and lobbyists dated from  
9 2009 to 2010 illustrate systemic violations of the Bechtel-DOE Contract.

10 236. On January 8, 2010, a report issued by the DNFSB was made  
11 public. The report raised significant safety issues in the design and  
12 construction of the Hanford WTP.

13 237. Following the report's publication, Bechtel and certain high  
14 level ORP officials began planning how best to minimize the impact of the  
15 letter to prevent it from negatively affecting future federal budget  
16 allocations for the WTP. Much focus was placed on the House Armed  
17 Services Committee, a standing committee responsible for funding and  
18 oversight of the Department of Defense and substantial portions of the  
19 DOE.

20 238. In an email chain dated January 8, 2010, a suggestion was made  
21 to Frank Russo, Bechtel Project Director for WTP, Daniel E. Kennedy Jr.,

1 Bechtel registered lobbyist, and Suzanne Heaston, Bechtel WTP  
2 communications manager, to contact Doug Clapp, the Democratic Majority  
3 clerk for the Senate Appropriations Subcommittee on Energy and Water  
4 Development, to take pre-emptive action against the Board's report.

5 239. Shirley Olinger, ORP site manager for the WTP, Theodore  
6 "Erik" Olds, ORP communications director, Greg Ashley, Bechtel  
7 management, and others were subsequently requested for their input.

8 240. It was recommended that Olinger, who had already planned to  
9 be in Washington D.C., meet with congressmen, especially those on  
10 appropriations committees, to deflect negative attention.

11 241. Olinger agreed to meet with more "critical" congressmen, and  
12 further recommended that "[Bechtel] get to the right members on the hill  
13 before this is taken out of context."

14 242. Olds likewise agreed, stating "I'm really interested in closing  
15 with House and Senate Appropriations given the rumors about the 2011  
16 budget."

17 243. A few days later, Bechtel employees began enacting their crisis  
18 management strategy, attempting to influence the mental impressions of  
19 certain congressional and professional staffers in Washington, D.C. by  
20 arranging one-on-one meetings and providing Bechtel's response to  
21 DNFSB's report.

1       244. On Monday, January 11, 2010, Suzanne Heaston sent Daniel  
2 Kennedy, a Bechtel registered lobbyist, a letter to provide to "selected  
3 congressional and professional staff," to "determine their 'anxiety' level  
4 about the issue" and requested that Kennedy, "assist in making  
5 appointments with those who would like one-on-one meetings with Shirley  
6 Olinger and/or Guy Girard, and Greg Ashley."

7       245. After circulating the letter to professional staff on both the  
8 House and Senate Armed Services Committees and certain staff of the  
9 Energy and Water Appropriation subcommittees, Kennedy spoke with  
10 Daryl Owen and Adam Ingols, lobbyists with the government relations  
11 and strategy consulting firm Daryl Owen Associates, Inc.

12       246. Kennedy updated Owen and Ingols on the status of  
13 neutralizing the effect of the DNFSB letter on federal lawmakers.

14       247. Kennedy also requested Owen's interpretation of Douglas  
15 Clapp's and other committee staff members' reaction to the letter and  
16 requested to arrange meetings with any concerned policymakers to  
17 diminish their worries over the efficacy of the WTP.

18       248. The following day, January 12, 2010, Daniel Kennedy reported  
19 that he had spoken with Madelyn R. Creedon, then-counsel to the staff of  
20 the Senate Committee for Armed Services, who seemed supportive of  
21

1 Bechtel's response to the DNFSB report and would not need to be  
2 personally visited by Shirley Olinger, Guy Girard, or Greg Ashley.

3       249. Kennedy also placed calls to Carrie Desmond at Senator  
4 Murray's office and Jessica Gleason at Congressman Hastings office to  
5 gauge their reactions and the status of their support for the WTP project at  
6 the Hanford Site.

7       250. Bechtel employees also provided talking points and other  
8 information on the Mixer at Hanford to Douglas Clapp prior to a meeting  
9 he had with the DNFSB regarding the efficacy of the jet propulsion mixer  
10 installed at Hanford.

11       251. In an e-mail from Daryl Owen to Frank Russo on January 26,  
12 2010, Owen stressed the importance of Clapp's support stating, "Doug is  
13 about the best, and often only, friend this project has. Our ability to stick to  
14 a funding level of \$690m, much less accelerate funding, rests almost  
15 exclusively on his good will. Perhaps we can get together on a conference  
16 call to discuss."

17       252. As the year progressed, Bechtel employees began to explicitly  
18 lobby professional staff for an additional \$50 million beyond the \$690  
19 million requested for the WTP project for fiscal year 2011.

20       253. In an e-mail from Daniel Kennedy dated February 28, 2010,  
21 Kennedy described meetings between Frank Russo and Senator Murray's

1 and Congressman Doc Hastings' staff where he was accompanied by  
2 Shirley Olinger and Erik Olds, among others.

3       254. Kennedy reported that in these meeting, despite the fact that  
4 professional committee staff were focused on the \$50 million in additional  
5 funds requested for 2011, he believed some headway was made in terms of  
6 addressing concerns, and later sent attachments to the committee  
7 professional staff detailing why Bechtel needed an extra \$50 million for  
8 2011, how those funds would be used, and the value of spending  
9 contingency dollars earlier than originally planned.

10       255. As the deadline for determining federal appropriations for  
11 fiscal year 2011 approached, Bechtel attempted to influence the language of  
12 the forthcoming House Armed Services Committee appropriations bill.

13       256. In an e-mail chain dated May 6, 2010, Jay Ferrar wrote to Daniel  
14 Kennedy, Frank Russo, Suzanne Heaston, Daryl Owen and Adam Ingols,  
15 suggesting they influence Madelyn R. Creedon's drafting of the  
16 appropriations bill to prevent decreasing or stalling the WTP project  
17 funding, stating:

18           I think an option here is for Madelyn to put language in the Bill  
19 calling for a quarterly report to the Committee's of jurisdiction  
20 on the progress being made to address the Board's concerns.

21           Word it broadly to preclude anything that portends stopping

1       the project, but tightly enough the DOE knows it's serious and  
2       will be held accountable.

3       257. Kennedy voiced his assent to this plan in a subsequent reply e-  
4       mail, stating, "I think this approach is worth pursuing - may give Madelyn  
5       just enough to satisfy her concerns, but just short of delaying activities on  
6       the project. This way she wouldn't be ignoring the DNFSB's concerns."

7       258. Kennedy went on to suggest drafting the language of the bill  
8       themselves, "[i]f we don't suggest a path forward for Madelyn - she may  
9       find one on her own. Suggest we draft some language that you think you  
10      could live with - and then discuss."

11       259. Daryl Owen further urged Douglas Clapp to contact Madelyn  
12      Creedon to discuss the appropriations bill and to open up conversation  
13      between the two policymakers and supporters of Bechtel's handling of the  
14      WTP project at Hanford.

15       260. Bechtel management and employees, who are paid through  
16      taxpayer funds, have engaged in a prolonged and consistent pattern of  
17      lobbying in order to persuade lawmakers to maintain and accelerate  
18      funding for the WTP project at Hanford over the course of 2010 in  
19      contravention of the DOE-Bechtel contract.

20       261. Each time Daryl Owen Associates, Inc. submitted an invoice to  
21      Bechtel, which Bechtel then submitted for reimbursement under the

1 Bechtel-DOE Contract, Bechtel was required to certify compliance with the  
2 Byrd Amendment. Each such certification was false and constituted a false  
3 claim.

4       262. Upon information and belief, the salaries of Daniel Kennedy Jr.  
5 and Suzanne Heaston have at all times been paid with appropriated funds.  
6 While the amount of Kennedy's and Heaston's salaries attributable to their  
7 work with their illegal lobbying, is not known at this time, each time  
8 Bechtel submitted, under the Bechtel-DOE Contract, a request for  
9 reimbursement that included Kennedy's and Heaston's salaries, Bechtel  
10 was required to certify compliance with the Byrd Amendment. Each such  
11 certification was false to the extent that Kennedy and Heaston received  
12 salary for lobbying during the relevant period.

13           **D. FALSE CLAIM FOR ACCELERATED PAYMENT.**

14       263. For the 2011 congressional year, Bechtel sought an additional  
15 \$50 million in congressional funding.

16       264. Bechtel claimed to DOE and Congress that the money was  
17 going to be used to "accelerate" the design and construction of the WTP.

18       265. The money was not intended to be used to accelerate the design  
19 and construction of the WTP.

20       266. In a February 26, 2010 email, Michael Rocha, Bechtel Manager  
21 of Project Controls at the WTP, described to Frank Russo, "what work is in

1 jeopardy if we are not allowed to carryover funds from FY10 to FY11 as  
2 planned, and we do not receive the additional \$50m of BA in FY11 as  
3 currently planned."

4 267. Rocha admitted to Russo that "[a]s we discussed, not much of  
5 this work is 'accelerated,' the driver for the additional funding needed  
6 through FY11 is the 'skim' from DOE of \$17m in FY09, and the \$15m  
7 planned for in FY's 10 and 11."

8 268. Rocha then identified activities that would "add up to more  
9 than we want to show."

10 269. Rocha further noted that "key to note is that in reality if we did  
11 not receive the additional \$50m, or carryover was taken from us, most of  
12 these activities would still likely happen as they are critical/near critical  
13 path."

14 270. Bechtel knowingly made a claim for \$50 million from the  
15 United States to "accelerate" aspects of the WTP design and construction.  
16 This claim was false; Bechtel did not intend to use the funds for  
17 acceleration. Based on Bechtel's false claim of "acceleration," Bechtel  
18 received approximately \$45 million.

1       E. **FAILURE TO COMPLY WITH DOE-STD-3009 AND NQA-1**  
2                   **IN DEVELOPING THE QRA PROBABILISTIC TOOL**

3       271. Treating chemical nuclear wastes naturally generates large  
4 amounts of hydrogen gas. Because of its reactive nature, safety control  
5 measures must be in place to limit the accumulation to a quantity that does  
6 not detonate or jeopardize operability.

7       272. HPAV, or hydrogen in piping and ancillary vessels, is the  
8 understanding of how hydrogen performs in a pipe and ancillary vessel.  
9 HPAV studies the progression and effects of varying levels of hydrogen  
10 detonation and deflagration such as the stresses placed on piping, heat  
11 exchangers, and jumpers.

12      273. The Bechtel-DOE Contract requires the WTP safety basis  
13 documents be developed and implemented to comply with nuclear safety  
14 requirements established in 10 C.F.R. 830. The Safety Basis Requirements  
15 mandate the application of DOE-STD-3009, which provides the DOE  
16 established methodology for evaluating hazards and selecting safety  
17 controls.

18      274. To ensure that DOE nuclear facilities are designed and operated  
19 to rigorous standard, the DOE requires the application of a conservative  
20 and deterministic analysis in evaluating hazards.

21      275. DOE-STD-3009 expressly prohibits the use of frequency

1 analyses, or a probabilistic approach, for the selection of control measures.

2 276. In 2006, Bechtel and ORP re-baselined the Hanford WTP to add  
3 approximately \$8 billion to the WTP budget and extend schedule  
4 requirements.

5 277. Despite HPAV controls being a requirement prior to re-  
6 baselining, all funding for HPAV controls was removed.

7 278. Shirley Olinger, then ORP Site Manager, accepted a \$150  
8 million risk for the lack of HPAV controls.

9 279. Olinger and Greg Ashley, Bechtel management, colluded to  
10 find a less expensive approach to HPAV controls.

11 280. In a March 30, 2009 email, Olinger identified various  
12 mechanisms to reduce costs related to safety controls, including changing  
13 the calculations used in the Authorization Basis and Material at Risk  
14 report. In deciding whether to expend money on safety equipment,  
15 Olinger also requested in that same email that Ashley categorize all  
16 opportunities reduce HPAV controls by the level of contention that would  
17 be associated with the change:

18 What would be helpful to me is to break the changes that can  
19 be done by following categories:

20 1) MAR and AB analysis changes (eg, dispersion calc) that  
21 result in downgrading facility categorization and SSC

1 classification.

2) HPAV changes due to test results to date, change in MAR  
3 and some of the less contentious changes in HPAV calcs (eg,  
4 event duration, actual temperatures, etc).

5) HPAV changes we know will be contentious (eg, allowing  
6 only mitigation for the safety case, taking less conservative  
7 prevention assumptions for mission case).

8 So if we get all we need for HLW, LBL from #1 these  
9 discussions can take place now w/higher confidence of success.

10 Then for PT if we gain a majority of the SSC changes by 1 and 2  
11 we may want to evaluate the benefits of fighting for #3  
12 differently. For example, we may procure the eqmt but allow  
13 time to work out the details before we install the eqmt. This  
14 would allow more time to dialogue and demonstrate the  
15 benefit from a construction and commissioning complexity  
16 stand point.

17 281. Soon thereafter, Olinger formally authorized Ashley to research  
18 “alternative” methods to determining the controls that needed to be  
19 applied.

20 282. Bechtel devised the Quantitative Risk Analysis (QRA) tool to  
21 document: (1) the methodology used to quantify the expected hydrogen

1 event type, frequency, and severity; and (2) how the results of the  
2 frequency and severity analysis are used to perform structural analyses  
3 and develop code-based structural acceptance criteria from which design  
4 margin is determined.

5 283. The E&NS group, which was tasked with ensuring compliance  
6 with regulatory safety requirements, was not involved in QRA  
7 development.

8 284. QRA testing performed by Dominion Engineering Inc. and  
9 potentially others to determine alternative methods was not performed in  
10 accordance with NQA-1. Specifically, NQA-1-2000, Part I, consists of 18  
11 requirements; 15 of these contain detailed requirements in addition to a  
12 basic initial introductory-level expectation paragraph. Bechtel only  
13 required Dominion Engineering, Inc. and other QRA potential  
14 subcontractors to meet the basic paragraph for each of the applicable Part I.

15 285. Application of the QRA tool would reduce HPAV control  
16 measures, reducing overall costs and associated DOE risk.

17 286. The QRA, however, violated DOE-STD-3009, as required by 10  
18 C.F.R 830.

19 287. The QRA was not acceptable by the very nature of its design.  
20 The tool provided a probabilistic analysis for hydrogen hazards in  
21 violation of DOE-STD-3009 and used frequency distributions that

1 truncated high hazard, low probability events. In addition, DOE directed  
2 Bechtel to use bounding hydrogen generation rates and an ignition  
3 probability of 1 to ensure the robustness of hydrogen controls in pipes and  
4 ancillary vessels. The QRA did not account for these DOE requirements.

5 288. Having found a less expensive way to implement HPAV  
6 controls, Bechtel and certain DOE/ORP officials, Shirley Olinger and Ines  
7 Triay, further colluded to ensure use of the QRA at the WTP.

8 289. Ashley and other Bechtel employees and Olinger and Triay  
9 recognized that QRA did not comply with DOE-STD-3009 but decreed that  
10 the QRA would be used nonetheless.

11 290. In a 2010 hearing before the DNFSB, Relator Busche, as the  
12 E&NS manager, explained that she could not use the QRA tool to  
13 determine HPAV control measures because of its probabilistic  
14 methodology, a method prohibited by DOE-STD-3009.

15 291. Olinger and Triay were upset with Relator Busche's testimony.

16 292. Leo Sain, Bill Gay, and Frank Russo asked Relator Busche to  
17 change her testimony to reflect approval of the QRA tool.

18 293. Relator Busche refused.

19 294. The DNFSB later issued a report validating Relator Busche's  
20 treatment following the hearing:

21 The testimony of several witnesses confirms that the expert

witness [Relator Busche] was verbally admonished by the highest level of DOE line management [Triay and Olinger] at DOE's debriefing meeting following this session of the hearing. Although testimony varies on the exact details of the verbal interchange, it is clear that strong hostility was expressed toward the expert witness whose testimony strayed from DOE management's policy while that individual was attempting to adhere to accepted professional standards. Testimony by a senior DOE official confirmed the validity of the expert witness' concerns. In addition, the expert witness testified that they felt pressure to change their testimony, but refused to do so.

295. After the DNFSB hearing and following extensive discussions with Bechtel, ORP modified the planned use for the QRA from a tool to determine necessary HPAV controls to a tool to assess compliance with ASME-B31.3 code for pipe loads and fatigue failure due to hydrogen detonation.

296. Federal safety regulations and Bechtel-DOE contract requirements do not impose ASME-B31.3 criteria for load weight on the WTP. Instead, the regulations and requirements mandate that WTP be designed to be bounding against worst case scenarios, which would implicitly meet ASME-B31.3.

1       297. Thus, the QRA tool was again deemed not usable by E&NS.

2       298. Before a subsequent DNFSB hearing discussing WTP safety  
3 issues, Relator Busche was questioned regarding QRA and other aspects of  
4 safety control processes.

5       299. As permitted by DNFSB hearing rules, Relator Busche, while  
6 testifying, received notecards containing information that she could choose  
7 to use in responding to a question.

8       300. Shirley Olinger was not pleased with the testimony Relator  
9 Busche was providing on the QRA topic.

10      301. Olinger interceded notecards and prevented Relator Busche  
11 from providing all of the information during her testimony.

12      302. The following day, Leo Sain, URS management, testified before  
13 the DNFSB. Although unclear as to recipient, Olinger wrote on a notecard  
14 that "Leo better clear up QRA and SB statement."

15      303. DOE Headquarters subsequently concurred with Relator  
16 Busche's position concerning the QRA.

17      304. Olinger and Bechtel requested that Relator Busche relieve the  
18 DOE-STD-3009 requirement. Relator Busche refused; the only way to  
19 obtain relief from the standard is to request such from the federal  
20 regulatory board. Olinger replied that they would never be granted such  
21 relief.

1       305. Bechtel, from 2010 to the present, continued to develop the  
2 QRA tool despite knowing of its noncompliance with DOE-STD-3009.

3       306. Bechtel knowingly, or with reckless disregard, developed and  
4 falsely certified a QRA tool that does not conform to the federal safety  
5 requirements, based on NQA-1 noncompliant tests, and is of no value to  
6 the United States.

7       307. To date, Bechtel claimed approximately \$140 million in costs  
8 related to testing and development of the QRA tool, and Bechtel continues  
9 to develop the tool and submit claims for QRA costs despite its  
10 indeterminate use.

11       F. **FAILURE TO COMPLY WITH SAFETY REQUIREMENTS IN**  
12                   **DESIGNING AND FABRICATING THE PVV/PVP SYSTEM.**

13       308. To prevent the accumulation of hydrogen off-gassed from the  
14 pretreatment process, an exhaust system must remove the hydrogen from  
15 the head space of the vessels and filter gas through “scrubbers” and a  
16 dedicated filtration system.

17       309. This system, known as Process Vessel Vent Process (PVP) and  
18 Process Vessel Vent Exhaust (PVV) system, is designed to protect the  
19 public, the environment, and the operating staff, and compliance with  
20 environmental treatment requirements must be achieved prior to release  
21 from the PVV exhaust stack.

1       310. Design verification of the PVP/PVV system occurred on  
2 October of 2003; however, at that time, only one item had been completed.  
3 An entry was made in the WTP Action Tracking System to complete  
4 verification by 2006. Bechtel did not meet the 2006 deadline; instead,  
5 Bechtel rescheduled the design verification many times with little  
6 justification.

7       311. Since at least 2002, the Preliminary Documented Safety  
8 Analysis Report (PDSA), which is an Authorization Basis document  
9 requiring strict compliance, has required the PVV/PVP system to be  
10 designed to mitigate potential dangers associated with multiple  
11 pressurized releases of hydrogen gas, otherwise known as overblows, in  
12 the PT facility.

13       312. Bechtel subcontracted the design of the PVV/PVP system to  
14 Duratek, Inc. and potentially others unknown at this time.

15       313. Bechtel failed to flowdown the PDSA overblows requirement to  
16 subcontractors designing and fabricating all SSCs of the PVV/PVP system.

17       314. In or about July of 2010, Greg Ashley misrepresented to ORP  
18 officials, including Relator Brunson, that E&NS had actively participated  
19 and approved moving forward with the design of the PVV/PVP system.

20       315. On July 15, 2010, unaware of Ashley's misrepresentations,  
21 Relator Busche, the manager of E&NS, responded to direct questions from

1 Relator Brunson and other ORP employees concerning the E&NS  
2 involvement:

3 I communicated that ENS had been involved at a cursory level,  
4 and reiterated our trend input that realigns the PDSA starting  
5 with a hazop. They were under the impression that we had a  
6 more active involvement and had concurred/approved of the  
7 path forward. Gary [Brunson] indicated his frustration and  
8 indicated he would call.

9 316. Contrary to Ashley's statements, Bechtel management ignored  
10 reports from E&NS that the PVV/PVP system failed to meet the  
11 Authorization Basis and refused to flowdown the requirement.

12 317. Upon hearing of Relator Busche's statements to Relator  
13 Brunson, Frank Russo remarked to Dale Knutson and Greg Ashley that  
14 "[w]ith all due respect, fishing for issues (and Donna helping create one)  
15 will not help anyone. Ashley is the voice of the entire Technical  
16 organization and if a critical question isn't asked or vetted by him, then it  
17 just doesn't count." Russo then accused Relator Busche of saying "the most  
18 inciting thing," and that he would "fix that part."

19 318. Bechtel never fixed the PVV/PVP system design to allow for  
20 multiple overblows. As a result, major elements of the PVV/PVP system

1 have been designed, fabricated, and installed and are unable to sustain  
2 multiple overblows.

3 319. As a result, Bechtel knowingly, or with reckless disregard,  
4 subcontracted, accepted and falsely certified a PVV/PVP system that does  
5 not conform to the Authorization Basis.

6 **G. PROCUREMENTS THAT FAILED TO MEET BASIC**  
7 **SAFETY REQUIREMENTS.**

8 320. The Bechtel-DOE Contract requires Bechtel to implement  
9 specific quality-control provisions.

10 321. Structures, systems, and components (SSCs) designated as  
11 Safety Class or Safety Significant must be designed and qualified to  
12 function as intended in specified environments.

13 322. Electrical safety equipment must be qualified in accordance  
14 with IEEE-323-1983, which requires documentary evidence of suitability  
15 and aging consideration based on analysis, experience, testing or a  
16 combination of the three methods.

17 323. Mechanical safety equipment must be qualified by a certificate  
18 of conformance to the equipment specifications that includes the  
19 environmental conditions and hazards and the effects of aging.

20 324. Upper level safety systems must be qualified by design as  
21 established by documented compliance with the Quality Assurance

1 Manual, an Authorization Basis document, for safety in engineering,  
2 procurement, and construction. Safety components contained within the  
3 system must be qualified in accordance with the applicable electrical and  
4 mechanical safety equipment requirements.

5 325. Prior to procurement or construction, all designs containing  
6 Safety Class or Safety Significant SSCs must go through a design  
7 verification process to provide assurance that SSCs reflect the safety  
8 requirements, are adequately designed, and that all designs are properly  
9 integrated.

10 326. Where time constraints preclude verification of an entire  
11 design, Bechtel is required to identify and control the unverified design  
12 elements. Bechtel must complete design verification prior to the SSC  
13 performing its function and before installation becomes irreversible, i.e.  
14 requires significant rework.

15 327. Bechtel design control procedures are clear that design media,  
16 such as drawings and technical specifications, may not be issued for  
17 procurement or construction until the design is fully compliant with the  
18 contractual Authorization Basis.

19 328. Since as early as 2004, Bechtel has knowingly, or with reckless  
20 disregard, falsely certified SSCs as compliant with quality requirements.  
21

1       329. Bechtel failed to flowdown quality requirements to  
2 subcontractors.

3       330. Bechtel permitted subcontractors to deviate from quality  
4 requirements in order to save cost and time. Bechtel routinely granted  
5 submitted supplier deviation disposition requests (SDDRs) to reduce  
6 quality requirements without obtaining the contractually required  
7 approval from E&NS, the Bechtel group charged with nuclear safety  
8 compliance.

9       331. Bechtel failed to implement required quality control measures  
10 to ensure that procured Safety Class and Safety Significant SSCs conformed  
11 to requirements.

12       332. Bechtel knowingly, or with reckless disregard, accepted and  
13 falsely qualified, or permitted the false qualification by a subcontractor or  
14 supplier, of Safety Class or Safety Significant SSCs that did not meet  
15 quality standards. This included using false certificates of conformances  
16 and other documentation certifying compliance.

17       333. Using the above described PVV/PVP system as an example  
18 of non-conformances, Bechtel procured and accepted PVP Caustic  
19 Scrubbers and PVV/PVP piping that failed to meet quality requirements.

20       334. PVP Caustic Scrubbers must maintain a service life of at least  
21 40 years without maintenance. Bechtel procured PVP Caustic Scrubbers

1 from Premier Technology, Inc. that do not have a verified 40 year service  
2 life. Bechtel failed to flowdown the requirements and from Premier  
3 Technology, Inc. was unable to provide the required assurance, rendering  
4 the PVP Caustic Scrubbers quality indeterminate and of no use.

5       335. Bechtel likewise failed to flowdown to the subcontractor  
6 seismic requirements for PVV/PVP piping. In late 2007, Bechtel issued a  
7 Decision to Deviate document, changing the seismic requirements for  
8 piping from Seismic Category III, which denotes no seismic safety function,  
9 to Seismic Category, which denotes top seismic safety function.

10      336. This change required the majority of the PVV/PVP piping  
11 system to be hardened to withstand an earthquake.

12      337. The Bechtel design originator and design checker failed to  
13 incorporate this design input into the piping and instrument drawings, and  
14 PVV/PVP piping diagrams were not updated to reflect the additional  
15 hardening requirement.

16      338. Bechtel failed to flowdown the seismic requirements to the  
17 vendor.

18      339. At least nineteen piping lines were procured without the  
19 requisite hardness to withstand an earthquake. The non-conforming  
20 piping was installed in the PT facility.

1       340. In violation of quality requirements, Bechtel quality assurance  
2 permitted the acceptance of non-conforming piping and Bechtel  
3 engineering failed to verify the design prior to installation.

4       341. Bechtel knowingly, or with reckless disregard, accepted and  
5 qualified the PVV/PVP piping for use in the PT facility. Bechtel  
6 knowingly, or with reckless disregard, falsely certified these SSCs as  
7 compliant with quality requirements.

8       342. The procurements identified below are additional examples of  
9 the SSCs that Bechtel falsely certified as compliant with quality  
10 requirements:

11           a.       Bechtel procured from Peterson Inc. hatches, plates,  
12 pits, and related components pursuant to material requisition no.  
13 24590-QL-MRA-ADDH-00003. These procured SSCs failed to meet  
14 required bounding environmental conditions for humidity, chemical  
15 exposure, temperature and/or a steam-break hazard. Bechtel  
16 accepted and qualified these SSCs as Safety Class or Safety  
17 Significant SSCs for use in the HLW Facility at the WTP. Bechtel  
18 knowingly, or with reckless disregard, falsely certified these SSCs as  
19 compliant with quality requirements.

20           b.       Bechtel procured important to safety piping from  
21 Shaw Naptech, Inc. pursuant to material requisition nos. 25490-QL-

1                   POB-PS02-00009, 24590-POA-PS02-00009, among others. The  
2 procured piping failed to meet traceability and pedigree  
3 requirements. Bechtel accepted and qualified piping as Safety Class  
4 or Safety Significant. Bechtel knowingly, or with reckless disregard,  
5 falsely certified for this piping as compliant with quality  
6 requirements.

7                   c.                  Bechtel procured from ABB, Inc. flow-indicator-  
8 rotameters and related components for the LAW and PTF facilities  
9 pursuant to material requisition no. 24590-QL-MRA-JF16-00001.  
10 These procured SSCs failed to meet required bounding  
11 environmental conditions for temperature. Bechtel accepted and  
12 qualified these SSCs as Safety Class or Safety Significant SSCs for use  
13 in the LAW and PTF Facilities at the WTP. Bechtel knowingly, or  
14 with reckless disregard, falsely certified these SSCs as compliant with  
15 quality requirements.

16                   d.                  Bechtel procured from ABW Technologies, Inc.  
17 instrument racks, inbleed enclosures, clips and related components  
18 for the LAB, LAW, HLW and PTF facilities pursuant to material  
19 requisition no. 24590-QL-MRA-JC00-00005. These procured SSCs  
20 failed to meet required bounding environmental conditions for  
21 chemical exposure, humidity, temperature, and/or a steam-break

1 hazard. Bechtel accepted and qualified these SSCs as Safety Class or  
2 Safety Significant SSCs for use in the LAB, LAW, HLW and PTF  
3 Facilities at the WTP. Bechtel knowingly, or with reckless disregard,  
4 falsely certified these SSCs as compliant with quality requirements.

5 e. Bechtel procured from ABW Technologies, Inc.  
6 magnetic flow transmitters and related components for the HLW  
7 facility pursuant to material requisition no. 24590-QL-MRA-JF08-  
8 00003. These procured SSCs failed to meet required bounding  
9 environmental conditions for humidity. Bechtel accepted and  
10 qualified these SSCs as Safety Class or Safety Significant SSCs for use  
11 in the HLW Facility at the WTP. Bechtel knowingly, or with reckless  
12 disregard, falsely certified these SSCs as compliant with quality  
13 requirements.

14 f. Bechtel procured from American Crane &  
15 Equipment hot cell monorail airlocks, monorail recovery systems, hot  
16 cell monorail hoists, and related components for the LAB facility  
17 pursuant to material requisition no. 24590-QL-MRA-MJKH-00002.  
18 These procured SSCs failed to meet required bounding  
19 environmental conditions for doses of radiation and temperature.  
20 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
21 Significant SSCs for use in the LAB Facility at the WTP. Bechtel

1 knowingly, or with reckless disregard, falsely certified these SSCs as  
2 compliant with quality requirements.

3 g. Bechtel procured from Ametek, Inc. transmitters  
4 and related components for the LAW facility pursuant to material  
5 requisition no. 24590-QL-MRA-JP02-00003. These procured SSCs  
6 failed to meet required bounding environmental conditions for  
7 temperature. Bechtel accepted and qualified these SSCs as Safety  
8 Class or Safety Significant SSCs for use in the LAW Facility at the  
9 WTP. Bechtel knowingly, or with reckless disregard, falsely certified  
10 these SSCs as compliant with quality requirements.

11 h. Bechtel procured from Ametek, Inc. technical specs  
12 and related components for the HLW facility pursuant to material  
13 requisition no. 24590-QL-MRA-JS01-00001. These procured SSCs  
14 failed to meet required bounding environmental conditions for  
15 temperature, chemical exposure, and/or humidity. Bechtel accepted  
16 and qualified these SSCs as Safety Class or Safety Significant SSCs for  
17 use in the HLW Facility at the WTP. Bechtel knowingly, or with  
18 reckless disregard, falsely certified these SSCs as compliant with  
19 quality requirements.

20 i. Bechtel procured from Beard Industries, Inc. a  
21 plant wash and disposal system breakpot and related components for

1 the PTF facility pursuant to material requisition no. 24590-QL-MRA-  
2 MVA0-00009. These procured SSCs failed to meet required bounding  
3 environmental conditions for humidity. Bechtel accepted and  
4 qualified these SSCs as Safety Class or Safety Significant SSCs for use  
5 in the PTF Facility at the WTP. Bechtel knowingly, or with reckless  
6 disregard, falsely certified these SSCs as compliant with quality  
7 requirements.

8 j. Bechtel procured from Chromalox, Inc. a HEPA  
9 preheater, sacrificial heater element assemblies, and related  
10 components for the LAW facility pursuant to material requisition no.  
11 24590-QL-MRA-MEE0-00003. These procured SSCs failed to meet  
12 required bounding environmental conditions for temperature.  
13 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
14 Significant SSCs for use in the LAW Facility at the WTP. Bechtel  
15 knowingly, or with reckless disregard, falsely certified these SSCs as  
16 compliant with quality requirements.

17 k. Bechtel procured from Flanders CSC C5V, C2V, and  
18 C3V HEPA filter housings, exhausts, filters, a decon booth &  
19 glovebox HEPA housing, and related components for the PTF facility  
20 pursuant to material requisition no. 24590-QL-MRA-MKH0-00001.  
21 These procured SSCs failed to meet required bounding

1 environmental conditions for chemical exposure, humidity, and  
2 temperature. Bechtel accepted and qualified these SSCs as Safety  
3 Class or Safety Significant SSCs for use in the PTF Facility at the  
4 WTP. Bechtel knowingly, or with reckless disregard, falsely certified  
5 these SSCs as compliant with quality requirements.

6           l. Bechtel procured from Flanders CSC an  
7 ultrafiltration feed lag pump b, ultrafiltration feed lag pump a, and  
8 related components for the PTF facility pursuant to material  
9 requisition no. 24590-QL-MRA-MPC0-00009. These procured SSCs  
10 failed to meet required bounding environmental conditions for doses  
11 of radiation. Bechtel accepted and qualified these SSCs as Safety  
12 Class or Safety Significant SSCs for use in the PTF Facility at the  
13 WTP. Bechtel knowingly, or with reckless disregard, falsely certified  
14 these SSCs as compliant with quality requirements.

15           m. Bechtel procured from Flanders CSC pumps and  
16 related components for the PTF facility pursuant to material  
17 requisition no. 24590-QL-MRA-MPC0-00012. These procured SSCs  
18 failed to meet required bounding environmental conditions for doses  
19 of radiation and/or humidity. Bechtel accepted and qualified these  
20 SSCs as Safety Class or Safety Significant SSCs for use in the PTF

1 Facility at the WTP. Bechtel knowingly, or with reckless disregard,  
2 falsely certified these SSCs as compliant with quality requirements.

3 n. Bechtel procured from Flanders CSC an ion-  
4 exchange feed pump, and related components for the PTF facility  
5 pursuant to material requisition no. 24590-QL-MRA-MPC0-00013.  
6 These procured SSCs failed to meet required bounding  
7 environmental conditions for doses of radiation and/or humidity.  
8 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
9 Significant SSCs for use in the PTF Facility at the WTP. Bechtel  
10 knowingly, or with reckless disregard, falsely certified these SSCs as  
11 compliant with quality requirements.

12 o. Bechtel procured from Flanders CSC vessels,  
13 ejectors, and related components for the PTF facility pursuant to  
14 material requisition no. 24590-QL-MRA-MPE0-00001. These  
15 procured SSCs failed to meet required bounding environmental  
16 conditions for humidity. Bechtel accepted and qualified these SSCs  
17 as Safety Class or Safety Significant SSCs for use in the PTF Facility at  
18 the WTP. Bechtel knowingly, or with reckless disregard, falsely  
19 certified these SSCs as compliant with quality requirements.

20 p. Bechtel procured from Flowserve Corporation  
21 control valves and regulators, and related components for the LAW

1 and PTF facilities pursuant to material requisition no. 24590-QL-  
2 MRA-JV01-00002. These procured SSCs failed to meet required  
3 bounding environmental conditions for temperature, chemical  
4 exposure, a duplicate control tag, and/or humidity. Bechtel accepted  
5 and qualified these SSCs as Safety Class or Safety Significant SSCs for  
6 use in the LAW and PTF Facilities at the WTP. Bechtel knowingly, or  
7 with reckless disregard, falsely certified these SSCs as compliant with  
8 quality requirements.

9 q. Bechtel procured from Fluidic Techniques/FTI  
10 Industries venturi tubes and related components for the LAW facility  
11 pursuant to material requisition no. 24590-QL-MRA-JF07-00001.  
12 These procured SSCs failed to meet required bounding  
13 environmental conditions for temperature. Bechtel accepted and  
14 qualified these SSCs as Safety Class or Safety Significant SSCs for use  
15 in the LAW Facility at the WTP. Bechtel knowingly, or with reckless  
16 disregard, falsely certified these SSCs as compliant with quality  
17 requirements.

18 r. Bechtel procured from Harris Thermal Transfer  
19 Products a PJV demister, anchor bolt locator templates, and related  
20 components for the PTF facility pursuant to material requisition no.  
21 24590-QL-MRA-MVA0-00013. These procured SSCs failed to meet

1 required bounding environmental conditions for chemical exposure.  
2 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
3 Significant SSCs for use in the PTF Facility at the WTP. Bechtel  
4 knowingly, or with reckless disregard, falsely certified these SSCs as  
5 compliant with quality requirements.

6 s. Bechtel procured from Hot Cell Services Corp.  
7 shielded window housings, shielded window liner, installation and  
8 extraction carts, and related components for the LAB facility  
9 pursuant to material requisition no. 24590-QL-MRA-ADDP-00002.  
10 These procured SSCs failed to meet required bounding  
11 environmental conditions for temperature. Bechtel accepted and  
12 qualified these SSCs as Safety Class or Safety Significant SSCs for use  
13 in the LAB Facility at the WTP. Bechtel knowingly, or with reckless  
14 disregard, falsely certified these SSCs as compliant with quality  
15 requirements.

16 t. Bechtel procured from Invensys Systems, Inc.  
17 control room and plant components, enclosures and related  
18 components for the LAW and PTF facilities pursuant to material  
19 requisition no. 24590-QL-MRA-JD03-00001. These procured SSCs  
20 failed to meet required bounding environmental conditions for  
21 environmental classification, steam-break hazards, chemical exposure

1 and/or temperature. Bechtel accepted and qualified these SSCs as  
2 Safety Class or Safety Significant SSCs for use in the LAW and PTF  
3 Facilities at the WTP. Bechtel knowingly, or with reckless disregard,  
4 falsely certified these SSCs as compliant with quality requirements.

5 u. Bechtel procured from Invensys Systems, Inc. a flow  
6 element-magnetic, flow transmitter- magnetic, and related  
7 components for the PTF facility pursuant to material requisition no.  
8 24590-QL-MRA-JF08-00002. These procured SSCs failed to meet  
9 required bounding environmental conditions for humidity. Bechtel  
10 accepted and qualified these SSCs as Safety Class or Safety  
11 Significant SSCs for use in the PTF Facility at the WTP. Bechtel  
12 knowingly, or with reckless disregard, falsely certified these SSCs as  
13 compliant with quality requirements.

14 v. Bechtel procured from Ionex Research Corporation  
15 fume hoods, partitions, crushers, compactors, shielded transfer  
16 imports/exports, and related components for the LAB facility  
17 pursuant to material requisition no. 24590-QL-MRA-MJW0-00006.  
18 These procured SSCs failed to meet required bounding  
19 environmental conditions for temperature. Bechtel accepted and  
20 qualified these SSCs as Safety Class or Safety Significant SSCs for use  
21 in the LAB Facility at the WTP. Bechtel knowingly, or with reckless

1 disregard, falsely certified these SSCs as compliant with quality  
2 requirements.

3 w. Bechtel procured from Kyungwon Century America  
4 Inc. extraction fans with motors, and related components for the PTF  
5 facility pursuant to material requisition no. 24590-QL-MRA-MACS-  
6 00004. These procured SSCs failed to meet required bounding  
7 environmental conditions for humidity. Bechtel accepted and  
8 qualified these SSCs as Safety Class or Safety Significant SSCs for use  
9 in the PTF Facility at the WTP. Bechtel knowingly, or with reckless  
10 disregard, falsely certified these SSCs as compliant with quality  
11 requirements.

12 x. Bechtel procured from Laboratory Impex Systems,  
13 ltd. stack discharge monitoring instruments, and related components  
14 for the LAW and HLW facilities pursuant to material requisition no.  
15 24590-QL-MRA-JA03-00001. These procured SSCs failed to meet  
16 required bounding environmental conditions for doses of radiation.  
17 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
18 Significant SSCs for use in the LAW and HLW Facilities at the WTP.  
19 Bechtel knowingly, or with reckless disregard, falsely certified these  
20 SSCs as compliant with quality requirements.

1                   y.                 Bechtel procured from Mid Columbia Engineering,  
2 Inc. plant service air racks, plant wash racks, and related components  
3 for the PTF facility pursuant to material requisition no. 24590-QL-  
4 MRA-PH02-00011. These procured SSCs failed to meet required  
5 bounding environmental conditions for chemical exposure. Bechtel  
6 accepted and qualified these SSCs as Safety Class or Safety  
7 Significant SSCs for use in the PTF Facility at the WTP. Bechtel  
8 knowingly, or with reckless disregard, falsely certified these SSCs as  
9 compliant with quality requirements.

10                  z.                 Bechtel procured from Mid Columbia Engineering,  
11 Inc. high pressure steam racks, plant service air racks, fluidics control  
12 racks, plant wash racks, and related components for the PTF facility  
13 pursuant to material requisition no. 24590-QL-MRA-PH02-00012.  
14 These procured SSCs failed to meet required bounding  
15 environmental conditions for chemical exposure. Bechtel accepted  
16 and qualified these SSCs as Safety Class or Safety Significant SSCs for  
17 use in the PTF Facility at the WTP. Bechtel knowingly, or with  
18 reckless disregard, falsely certified these SSCs as compliant with  
19 quality requirements.

20                  aa.                Bechtel procured from Mott Corp. ultrafilters and  
21 related components for the PTF facility pursuant to material

1 requisition no. 24590-QL-MRA-MVEF-00003. These procured SSCs  
2 failed to meet required bounding environmental conditions for  
3 chemical exposure and/or humidity. Bechtel accepted and qualified  
4 these SSCs as Safety Class or Safety Significant SSCs for use in the  
5 PTF Facility at the WTP. Bechtel knowingly, or with reckless  
6 disregard, falsely certified these SSCs as compliant with quality  
7 requirements.

8 bb. Bechtel procured from Northwest Copper Works,  
9 Inc. an ultrafiltration feed vessel, ring beam, and related components  
10 for the PTF facility pursuant to material requisition no. 24590-QL-  
11 MRC-MVA0-B0002. These procured SSCs failed to meet required  
12 bounding environmental conditions for humidity. Bechtel accepted  
13 and qualified these SSCs as Safety Class or Safety Significant SSCs for  
14 use in the PTF Facility at the WTP. Bechtel knowingly, or with  
15 reckless disregard, falsely certified these SSCs as compliant with  
16 quality requirements.

17 cc. Bechtel procured from Northwest Copper Works,  
18 Inc. ultrafiltration pulse pots, plant wash breakpots, and related  
19 components for the PTF facility pursuant to material requisition no.  
20 24590-QL-MRD-MVA0-00003. These procured SSCs failed to meet  
21 required bounding environmental conditions for chemical exposure

1 and/or humidity. Bechtel accepted and qualified these SSCs as  
2 Safety Class or Safety Significant SSCs for use in the PTF Facility at  
3 the WTP. Bechtel knowingly, or with reckless disregard, falsely  
4 certified these SSCs as compliant with quality requirements.

5 dd. Bechtel procured from Nuclear Logistics Inc.  
6 transformers, distribution panels and related components for the  
7 LAW facility pursuant to material requisition no. 24590-QL-MRA-  
8 EAA0-00001. These procured SSCs failed to meet required bounding  
9 environmental conditions for environmental classification. Bechtel  
10 accepted and qualified these SSCs as Safety Class or Safety  
11 Significant SSCs for use in the LAW Facility at the WTP. Bechtel  
12 knowingly, or with reckless disregard, falsely certified these SSCs as  
13 compliant with quality requirements.

14 ee. Bechtel procured from Nuclear Logistics Inc. 480V  
15 motor control centers and related components for the LAW facility  
16 pursuant to material requisition no. 24590-QL-MRA-EC00-00004.  
17 These procured SSCs failed to meet required bounding  
18 environmental conditions for chemical exposure. Bechtel accepted  
19 and qualified these SSCs as Safety Class or Safety Significant SSCs for  
20 use in the LAW Facility at the WTP. Bechtel knowingly, or with

1           reckless disregard, falsely certified these SSCs as compliant with  
2           quality requirements.

3           ff.           Bechtel procured from Nuclear Logistics Inc. load  
4           interrupter switches, dry type transformers, secondary unit  
5           substation load centers, and related components for the HLW and PT  
6           facilities pursuant to material requisition no. 24590-QL-MRA-EK00-  
7           00001. These procured SSCs failed to meet required bounding  
8           environmental conditions for chemical exposure and/or temperature.  
9           Bechtel accepted and qualified these SSCs as Safety Class or Safety  
10          Significant SSCs for use in the HLW and PT Facilities at the WTP.  
11          Bechtel knowingly, or with reckless disregard, falsely certified these  
12          SSCs as compliant with quality requirements.

13           gg.           Bechtel procured from Nuclear Logistics Inc. wafer  
14          check valves and related components for the LAW facility pursuant  
15          to material requisition no. 24590-QL-MRA-PV14-00004. These  
16          procured SSCs failed to meet required bounding environmental  
17          conditions for environmental classification, steam-break hazards,  
18          chemical exposure, and/or temperature. Bechtel accepted and  
19          qualified these SSCs as Safety Class or Safety Significant SSCs for use  
20          in the LAW Facility at the WTP. Bechtel knowingly, or with reckless

1 disregard, falsely certified these SSCs as compliant with quality  
2 requirements.

3 hh. Bechtel procured from Nuclear Systems Associates  
4 Inc. high pressure sodium lights, thru-wall lighting fixtures,  
5 maintenance shield plugs, and related components for the HLW  
6 facility pursuant to material requisition no. 24590-QL-MRA-EL00-  
7 00001. These procured SSCs failed to meet required bounding  
8 environmental conditions for steam-break hazards, chemical  
9 exposure, humidity, and/or temperature. Bechtel accepted and  
10 qualified these SSCs as Safety Class or Safety Significant SSCs for use  
11 in the HLW Facility at the WTP. Bechtel knowingly, or with reckless  
12 disregard, falsely certified these SSCs as compliant with quality  
13 requirements.

14 ii. Bechtel procured from Numet Engineering Ltd. CS  
15 ion exchange feed coolers and related components for the PTF facility  
16 pursuant to material requisition no. 24590-QL-MRA-MEPS-00001.  
17 These procured SSCs failed to meet required bounding  
18 environmental conditions for chemical exposure and/or humidity.  
19 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
20 Significant SSCs for use in the PTF Facility at the WTP. Bechtel

1 knowingly, or with reckless disregard, falsely certified these SSCs as  
2 compliant with quality requirements.

3 jj. Bechtel procured from Nuthem International Inc.  
4 jumper valves, plug valves, and related components for the HLW  
5 facility pursuant to material requisition no. 24590-QL-MRA-JV09-  
6 00008. These procured SSCs failed to meet required bounding  
7 environmental conditions for doses of radiation, chemical exposure,  
8 humidity, and/or temperature. Bechtel accepted and qualified these  
9 SSCs as Safety Class or Safety Significant SSCs for use in the HLW  
10 Facility at the WTP. Bechtel knowingly, or with reckless disregard,  
11 falsely certified these SSCs as compliant with quality requirements.

12 kk. Bechtel procured from Nutherm International Inc.  
13 UPS Systems, 480V AC, by-pass isolating transformers, batteries, and  
14 related components for the HLW facility pursuant to material  
15 requisition no. 24590-QL-MRA-EU00-00001. These procured SSCs  
16 failed to meet required bounding environmental conditions for  
17 chemical exposure. Bechtel accepted and qualified these SSCs as  
18 Safety Class or Safety Significant SSCs for use in the HLW Facility at  
19 the WTP. Bechtel knowingly, or with reckless disregard, falsely  
20 certified these SSCs as compliant with quality requirements.

1 ll. Bechtel procured from NuVision Engineering Inc.  
2 progressive cavity pumps and related components for the PTF facility  
3 pursuant to material requisition no. 24590-QL-MRA-MPRP-00001.  
4 These procured SSCs failed to meet required bounding  
5 environmental conditions for doses of radiation, humidity, and/or  
6 chemical exposure. Bechtel accepted and qualified these SSCs as  
7 Safety Class or Safety Significant SSCs for use in the PTF Facility at  
8 the WTP. Bechtel knowingly, or with reckless disregard, falsely  
9 certified these SSCs as compliant with quality requirements.

10 mm. Bechtel procured from Oregon Iron Works, Inc.  
11 shield doors, switch retrofit kits, and related components for the  
12 HLW and PTF facilities pursuant to material requisition no. 24590-  
13 QL-MRA-ADDH-00007. These procured SSCs failed to meet  
14 required bounding environmental conditions for humidity,  
15 environment classification, temperature, chemical exposure, and  
16 steam-break hazards. Bechtel accepted and qualified these SSCs as  
17 Safety Class or Safety Significant SSCs for use in the HLW and PTF  
18 Facilities at the WTP. Bechtel knowingly, or with reckless disregard,  
19 falsely certified these SSCs as compliant with quality requirements.

20 nn. Bechtel procured from Parsons Constructors &  
21 Fabricators, Inc. engineering documents the PTF facility pursuant to

1 material requisition no. 24590-QL-MRA-PF00-00044. These procured  
2 SSCs failed to meet required bounding environmental conditions for  
3 humidity, and/or chemical exposure. Bechtel accepted and qualified  
4 these SSCs as Safety Class or Safety Significant SSCs for use in the  
5 PTF Facility at the WTP. Bechtel knowingly, or with reckless  
6 disregard, falsely certified these SSCs as compliant with quality  
7 requirements.

8 oo. Bechtel procured from Petersen Inc. drum transfer  
9 hatches, cave export hatches, cave import hatches, and related  
10 components for the HLW facility pursuant to material requisition no.  
11 24590-QL-MRA-ADDH-00003. These procured SSCs failed to meet  
12 required bounding environmental conditions for humidity, chemical  
13 exposure, temperature and/or a steam-break hazard. Bechtel  
14 accepted and qualified these SSCs as Safety Class or Safety  
15 Significant SSCs for use in the HLW Facility at the WTP. Bechtel  
16 knowingly, or with reckless disregard, falsely certified these SSCs as  
17 compliant with quality requirements.

18 pp. Bechtel procured from Premier Technology Inc. Pa  
19 doors and frames and related components for the HLW and PTF  
20 facilities pursuant to material requisition no. 24590-QL-MRA-ADDB-  
21 00001. These procured SSCs failed to meet required bounding

1 environmental conditions for steam-break hazards, humidity, and/or  
2 chemical exposure. Bechtel accepted and qualified these SSCs as  
3 Safety Class or Safety Significant SSCs for use in the HLW and PTF  
4 Facilities at the WTP. Bechtel knowingly, or with reckless disregard,  
5 falsely certified these SSCs as compliant with quality requirements.

6 qq. Bechtel procured from Premier Technology Inc.  
7 waste transfer ports and related components for the LAB facility  
8 pursuant to material requisition no. 24590-QL-MRA-HCHH-00003.  
9 These procured SSCs failed to meet required bounding  
10 environmental conditions for temperature. Bechtel accepted and  
11 qualified these SSCs as Safety Class or Safety Significant SSCs for use  
12 in the LAB Facility at the WTP. Bechtel knowingly, or with reckless  
13 disregard, falsely certified these SSCs as compliant with quality  
14 requirements.

15 rr. Bechtel procured from Premier Technology Inc.  
16 posting ports and related components for the HLW and PTF facilities  
17 pursuant to material requisition no. 24590-QL-MRA-M000-00002.  
18 These procured SSCs failed to meet required bounding  
19 environmental conditions for chemical exposure, and/or humidity.  
20 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
21 Significant SSCs for use in the HLW and PTF Facilities at the WTP.

1 Bechtel knowingly, or with reckless disregard, falsely certified these  
2 SSCs as compliant with quality requirements.

3 ss. Bechtel procured from Premier Technology Inc.  
4 offset assemblies for 36" and 48" thick slabs and related components  
5 for the PTF facility pursuant to material requisition no. 24590-QL-  
6 MRA-PY00-00005. These procured SSCs failed to meet required  
7 bounding environmental conditions for doses of radiation, humidity,  
8 and/or temperature. Bechtel accepted and qualified these SSCs as  
9 Safety Class or Safety Significant SSCs for use in the PTF Facility at  
10 the WTP. Bechtel knowingly, or with reckless disregard, falsely  
11 certified these SSCs as compliant with quality requirements.

12 tt. Bechtel procured from Premier Technology Inc.  
13 vessel vents, heat exchange bulges, removable weirs, scrubbing  
14 liquid coolers, and related components for the PTF facility pursuant  
15 to material requisition no. 24590-QL-MRA-PY33-00004. These  
16 procured SSCs failed to meet required bounding environmental  
17 conditions for chemical exposure, humidity, and/or temperature.  
18 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
19 Significant SSCs for use in the PTF Facility at the WTP. Bechtel  
20 knowingly, or with reckless disregard, falsely certified these SSCs as  
21 compliant with quality requirements.

1           uu.         Bechtel procured from RSCC Wire & Cable LLC  
2 power, control and instrumentation cables, and related components  
3 for the LAB, LAW, HLW, and PTF facilities pursuant to material  
4 requisition no. 24590-QL-MRA-EW00-00001. These procured SSCs  
5 failed to meet required bounding environmental conditions for  
6 humidity. Bechtel accepted and qualified these SSCs as Safety Class  
7 or Safety Significant SSCs for use in the LAB, LAW, HLW, and PTF  
8 Facilities at the WTP. Bechtel knowingly, or with reckless disregard,  
9 falsely certified these SSCs as compliant with quality requirements.

10          vv.         Bechtel procured from S.A. Technology, Inc  
11 (formerly Special 7 6,706,278.31 Application Robotics - dba SA  
12 Robotics) LVP offgas exhausters and related components for the  
13 LAW facility pursuant to material requisition no. 24590-QL-MRA-  
14 MACS-00007. These procured SSCs failed to meet required bounding  
15 environmental conditions for doses of radiation. Bechtel accepted  
16 and qualified these SSCs as Safety Class or Safety Significant SSCs for  
17 use in the LAW Facility at the WTP. Bechtel knowingly, or with  
18 reckless disregard, falsely certified these SSCs as compliant with  
19 quality requirements.

20          ww.         Bechtel procured from S.A. Technology, Inc. racks  
21 and related components for the PTF facility pursuant to material

1 requisition no. 24590-QL-MRA-PH02-00004. These procured SSCs  
2 failed to meet required bounding environmental conditions for  
3 chemical exposure. Bechtel accepted and qualified these SSCs as  
4 Safety Class or Safety Significant SSCs for use in the PTF Facility at  
5 the WTP. Bechtel knowingly, or with reckless disregard, falsely  
6 certified these SSCs as compliant with quality requirements.

7 xx. Bechtel procured from S.A. Technology, Inc. racks,  
8 and related components for the PTF facility pursuant to material  
9 requisition no. 24590-QL-MRA-PH02-00008. These procured SSCs  
10 failed to meet required bounding environmental conditions for  
11 chemical exposure and/or humidity. Bechtel accepted and qualified  
12 these SSCs as Safety Class or Safety Significant SSCs for use in the  
13 PTF Facility at the WTP. Bechtel knowingly, or with reckless  
14 disregard, falsely certified these SSCs as compliant with quality  
15 requirements.

16 yy. Bechtel procured from Special Application Robotics,  
17 Inc. DBA S.A. Robotics HDH and RWH turntables, rails, tools, test  
18 equipment and assemblies, solid waste baskets, PIH decontamination  
19 basket, PFH and HFH filter baskets, and related components for the  
20 HLW facility pursuant to material requisition no. 24590-QL-MRA-  
21 HDYR-00001. These procured SSCs failed to meet required bounding

1 environmental conditions for humidity and/or chemical exposure.  
2 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
3 Significant SSCs for use in the HLW Facility at the WTP. Bechtel  
4 knowingly, or with reckless disregard, falsely certified these SSCs as  
5 compliant with quality requirements.

6 zz. Bechtel procured from Special Applications  
7 Technology, Inc. C1/C2/C3 supply systems, C2/C3/C5 exhaust  
8 systems, and related components for the HLW and PTF facilities  
9 pursuant to material requisition no. 24590-QL-SRA-MDHM-00001.  
10 These procured SSCs failed to meet required bounding  
11 environmental conditions for doses of radiation, humidity and/or  
12 temperature. Bechtel accepted and qualified these SSCs as Safety  
13 Class or Safety Significant SSCs for use in the HLW and PTF Facilities  
14 at the WTP. Bechtel knowingly, or with reckless disregard, falsely  
15 certified these SSCs as compliant with quality requirements.

16 aaa. Bechtel procured from Special Applications  
17 Technology, Inc. pressure reducing regulators, pressure gauges,  
18 panel nuts, and related components for the PTF facility pursuant to  
19 material requisition no. 24590-CD-FMR-JV05-00002. These procured  
20 SSCs failed to meet required bounding environmental conditions for  
21 humidity and/or chemical exposure. Bechtel accepted and qualified

1       these SSCs as Safety Class or Safety Significant SSCs for use in the  
2 PTF Facility at the WTP. Bechtel knowingly, or with reckless  
3 disregard, falsely certified these SSCs as compliant with quality  
4 requirements.

5           bbb.       Bechtel procured from Special Applications  
6 Technology, Inc. wash effluent breakpots, acidic waste transfer  
7 breakpots, and related components for the PTF facility pursuant to  
8 material requisition no. 24590-QL-MRC-MVA0-00003. These  
9 procured SSCs failed to meet required bounding environmental  
10 conditions for humidity. Bechtel accepted and qualified these SSCs  
11 as Safety Class or Safety Significant SSCs for use in the PTF Facility at  
12 the WTP. Bechtel knowingly, or with reckless disregard, falsely  
13 certified these SSCs as compliant with quality requirements.

14           ccc.       Bechtel procured from SSM Industries, Inc. exhaust  
15 fans and related components for the HLW and PTF facilities pursuant  
16 to material requisition no. 24590-QL-MRA-MACS-00005. These  
17 procured SSCs failed to meet required bounding environmental  
18 conditions for doses of radiation, humidity, and/or temperature.  
19 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
20 Significant SSCs for use in the HLW and PTF Facilities at the WTP.

1 Bechtel knowingly, or with reckless disregard, falsely certified these  
2 SSCs as compliant with quality requirements.

3 ddd. Bechtel procured from Standard Calibrations, Inc.  
4 technical specifications for the HLW, LAW, and PTF facilities  
5 pursuant to material requisition no. 24590-QL-MRA-JP01-00002.  
6 These procured SSCs failed to meet required bounding  
7 environmental conditions for humidity, and/or temperature. Bechtel  
8 accepted and qualified these SSCs as Safety Class or Safety  
9 Significant SSCs for use in the HLW, LAW, and PTF Facilities at the  
10 WTP. Bechtel knowingly, or with reckless disregard, falsely certified  
11 these SSCs as compliant with quality requirements.

12 eee. Bechtel procured from Thermo Eberline, Inc. an  
13 RMS3 with external HP290, digital area monitors, cables, connectors,  
14 software, and related components for the LAB facility pursuant to  
15 material requisition no. 24590-CM-FMR-HAHH-00001. These  
16 procured SSCs failed to meet required bounding environmental  
17 conditions for temperature. Bechtel accepted and qualified these  
18 SSCs as Safety Class or Safety Significant SSCs for use in the LAB  
19 Facility at the WTP. Bechtel knowingly, or with reckless disregard,  
20 falsely certified these SSCs as compliant with quality requirements.

1 fff. Bechtel procured from Thompson Mechanical  
2 Contractors, Inc. wall-to-header fit-up tests, process jumpers, jumper  
3 support, jumper headers, jumper horiz blanks, pneumatic jumpers,  
4 and related components for the PTF facility pursuant to material  
5 requisition no. 24590-QL-MRA-PF00-00016. These procured SSCs  
6 failed to meet required bounding environmental conditions for  
7 chemical exposure and/or humidity. Bechtel accepted and qualified  
8 these SSCs as Safety Class or Safety Significant SSCs for use in the  
9 PTF Facility at the WTP. Bechtel knowingly, or with reckless  
10 disregard, falsely certified these SSCs as compliant with quality  
11 requirements.

12 ggg. Bechtel procured from Vanguard Distributors, Inc.  
13 master-slave manipulators and related components for the HLW and  
14 PTF facilities pursuant to material requisition no. 24590-QL-MRA-  
15 MJW0-00003. These procured SSCs failed to meet required bounding  
16 environmental conditions for humidity, temperature, chemical  
17 exposure, and steam-break hazards. Bechtel accepted and qualified  
18 these SSCs as Safety Class or Safety Significant SSCs for use in the  
19 HLW and PTF Facilities at the WTP. Bechtel knowingly, or with  
20 reckless disregard, falsely certified these SSCs as compliant with  
21 quality requirements.

1           hhh.         Bechtel procured from Vanguard Distributors, Inc.  
2 steam injectors, emptying ejectors, transfer ejectors, and related  
3 components for the HLW facility pursuant to material requisition no.  
4 24590-QL-MRA-MPE0-00001. These procured SSCs failed to meet  
5 required bounding environmental conditions for humidity. Bechtel  
6 accepted and qualified these SSCs as Safety Class or Safety  
7 Significant SSCs for use in the HLW Facility at the WTP. Bechtel  
8 knowingly, or with reckless disregard, falsely certified these SSCs as  
9 compliant with quality requirements.

10          iii.         Bechtel procured from Vanguard Distributors, Inc.  
11 melters and melter Rails, and related components for the HLW  
12 facility pursuant to material requisition no. 24590-QL-MRA-MQR0-  
13 00001. These procured SSCs failed to meet required bounding  
14 environmental conditions for humidity, temperature, and chemical  
15 exposure, and SSCs fail to meet required seismic bounding  
16 conditions . Bechtel accepted and qualified these SSCs as Safety Class  
17 or Safety Significant SSCs for use in the HLW Facility at the WTP.  
18 Bechtel knowingly, or with reckless disregard, falsely certified these  
19 SSCs as compliant with quality requirements.

20          jjj.         Bechtel procured from Vanguard Distributors, Inc.  
21 bogies and related components for the HLW facility pursuant to

1 material requisition no. 24590-QL-MRA-MQTS-00001. These  
2 procured SSCs failed to meet required bounding environmental  
3 conditions for doses of radiation, humidity, and chemical exposure,  
4 and SSCs fail to meet required seismic bounding conditions . Bechtel  
5 accepted and qualified these SSCs as Safety Class or Safety  
6 Significant SSCs for use in the HLW Facility at the WTP. Bechtel  
7 knowingly, or with reckless disregard, falsely certified these SSCs as  
8 compliant with quality requirements.

9 kkk. Bechtel procured from Vanguard Distributors, Inc.  
10 bogies and related components for the HLW facility pursuant to  
11 material requisition no. 24590-QL-MRA-MQTS-00002. These  
12 procured SSCs failed to meet required bounding environmental  
13 conditions for chemical exposure, humidity, and/or temperature.  
14 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
15 Significant SSCs for use in the HLW Facility at the WTP. Bechtel  
16 knowingly, or with reckless disregard, falsely certified these SSCs as  
17 compliant with quality requirements.

18 ill. Bechtel procured from Vanguard Distributors, Inc.  
19 racks and related components for the HLW facility pursuant to  
20 material requisition no. 24590-QL-MRA-PH02-00007. These procured  
21 SSCs failed to meet required bounding environmental conditions for

1 environmental classification, humidity, and/or steam-break hazards.  
2 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
3 Significant SSCs for use in the HLW Facility at the WTP. Bechtel  
4 knowingly, or with reckless disregard, falsely certified these SSCs as  
5 compliant with quality requirements.

6 mmm. Bechtel procured from Vanguard Distributors, Inc.  
7 ITS in-line air filter-dryers, plant service air in-line particulate filters,  
8 and related components for the HLW facility pursuant to material  
9 requisition no. 24590-QL-MRA-PY02-00003. These procured SSCs  
10 failed to meet required bounding environmental conditions for  
11 temperature. Bechtel accepted and qualified these SSCs as Safety  
12 Class or Safety Significant SSCs for use in the HLW Facility at the  
13 WTP. Bechtel knowingly, or with reckless disregard, falsely certified  
14 these SSCs as compliant with quality requirements.

15 nnn. Bechtel procured from Vanguard Distributors, Inc.  
16 wash effluent breakpots, acidic waste transfer breakpots, and related  
17 components for the HLW facility pursuant to material requisition no.  
18 24590-QL-MRC-MVA0-00003. These procured SSCs failed to meet  
19 required bounding environmental conditions for humidity. Bechtel  
20 accepted and qualified these SSCs as Safety Class or Safety  
21 Significant SSCs for use in the HLW Facility at the WTP. Bechtel

1 knowingly, or with reckless disregard, falsely certified these SSCs as  
2 compliant with quality requirements.

3 ooo. Bechtel procured from Vat Incorporated remote  
4 operated dampers and related components for the HLW and PTF  
5 facilities pursuant to material requisition no. 24590-QL-MRA-MDP0-  
6 00002. These procured SSCs failed to meet required bounding  
7 environmental conditions for doses of radiation. Bechtel accepted  
8 and qualified these SSCs as Safety Class or Safety Significant SSCs for  
9 use in the HLW and PTF Facilities at the WTP. Bechtel knowingly, or  
10 with reckless disregard, falsely certified these SSCs as compliant with  
11 quality requirements.

12 ppp. Bechtel procured from Vat Incorporated technical  
13 specifications for the HLW facility pursuant to material requisition  
14 no. 24590-QL-MRA-MEHX-00001. These procured SSCs failed to  
15 meet required bounding environmental conditions for doses of  
16 radiation, chemical exposure, and/or temperature. Bechtel accepted  
17 and qualified these SSCs as Safety Class or Safety Significant SSCs for  
18 use in the HLW Facility at the WTP. Bechtel knowingly, or with  
19 reckless disregard, falsely certified these SSCs as compliant with  
20 quality requirements.

1           qqq.         Bechtel procured from Vat Incorporated power  
2 manipulators and related components for the HLW facility pursuant  
3 to material requisition no. 24590-QL-MRA-MJW0-00002. These  
4 procured SSCs failed to meet required bounding environmental  
5 conditions for temperature. Bechtel accepted and qualified these  
6 SSCs as Safety Class or Safety Significant SSCs for use in the HLW  
7 Facility at the WTP. Bechtel knowingly, or with reckless disregard,  
8 falsely certified these SSCs as compliant with quality requirements.

9           rrr.         Bechtel procured from Velan Valve Corporation  
10 jumper valves, ball or plug valves, and related components for the  
11 PTF facility pursuant to material requisition no. 24590-QL-MRA-  
12 JV09-00008. These procured SSCs failed to meet required bounding  
13 environmental conditions for doses of radiation, chemical exposure,  
14 and/or humidity. Bechtel accepted and qualified these SSCs as  
15 Safety Class or Safety Significant SSCs for use in the PTF Facility at  
16 the WTP. Bechtel knowingly, or with reckless disregard, falsely  
17 certified these SSCs as compliant with quality requirements.

18           sss.         Bechtel purchased and dedicated 22,000 bulk  
19 manual valves that are indeterminate as the safety functional  
20 requirement of internal isolation function. The bulk valves were  
21

1 procured Velan Valve Corporation, Bonney Forge, and Nuclear  
2 Logistics, Inc.

3 ttt. Bechtel procured from Wagstaff, Inc. heh cask  
4 lidding machines, liners, special tools, fixtures, and handling beams,  
5 and related components for the HLW facility pursuant to material  
6 requisition no. 24590-QL-MRA-HCTH-00002. These procured SSCs  
7 failed to meet required bounding environmental conditions for  
8 humidity, temperature, chemical exposure, and steam break, and  
9 SSCs fail to meeting requirement bounding conditions for seismic.  
10 Bechtel accepted and qualified these SSCs as Safety Class or Safety  
11 Significant SSCs for use in the HLW Facility at the WTP. Bechtel  
12 knowingly, or with reckless disregard, falsely certified these SSCs as  
13 compliant with quality requirements.

14 uuu. Bechtel procured from Weir Valves & Controls USA  
15 valves, heat shields, and related components for the HLW and LAW  
16 facilities pursuant to material requisition no. 24590-QL-MRA-JV01-  
17 00003. These procured SSCs failed to meet required bounding  
18 environmental conditions for chemical exposure, humidity, and/or  
19 temperature. Bechtel accepted and qualified these SSCs as Safety  
20 Class or Safety Significant SSCs for use in the HLW and LAW

1 Facilities at the WTP. Bechtel knowingly, or with reckless disregard,  
2 falsely certified these SSCs as compliant with quality requirements.

3 vvv. Bechtel procured from West Metal Works Inc.  
4 breakpots and related components for the PTF facility pursuant to  
5 material requisition no. 24590-QL-MRA-MVA0-00015. These  
6 procured SSCs failed to meet required bounding environmental  
7 conditions for chemical exposure and/or humidity. Bechtel accepted  
8 and qualified these SSCs as Safety Class or Safety Significant SSCs for  
9 use in the PTF Facility at the WTP. Bechtel knowingly, or with  
10 reckless disregard, falsely certified these SSCs as compliant with  
11 quality requirements.

12 www. Bechtel procured from Wright Industries, Inc.  
13 reflective metal insulations for encapsulating lines and related  
14 components for the PTF facility pursuant to material requisition no.  
15 24590-QL-MRA-NNP0-00002. These procured SSCs failed to meet  
16 required bounding environmental conditions for duplicate control  
17 tags. Bechtel accepted and qualified these SSCs as Safety Class or  
18 Safety Significant SSCs for use in the PTF Facility at the WTP. Bechtel  
19 knowingly, or with reckless disregard, falsely certified these SSCs as  
20 compliant with quality requirements.

1                   xxx.         Bechtel procured from Wright Industries, Inc. plugs  
2 and related components for the LAB, HLW, and PTF facilities  
3 pursuant to material requisition no. 24590-QL-MRA-EMM3-00001.  
4 These procured SSCs failed to meet required bounding  
5 environmental conditions for doses of radiation, temperature, and/or  
6 humidity. Bechtel accepted and qualified these SSCs as Safety Class  
7 or Safety Significant SSCs for use in the LAB, HLW, and PTF  
8 Facilities at the WTP. Bechtel knowingly, or with reckless disregard,  
9 falsely certified these SSCs as compliant with quality requirements.

10                  343. The costs associated with the above SCCs is not precisely  
11 known, but is estimated to be in the hundreds of millions of dollars;  
12 further, the cost to the United States to reevaluate SSCs, and if necessary,  
13 rework or procure again, would be massive and would have a detrimental  
14 impact on the ability of DOE to meet its obligations under the Tri-Party  
15 Consent Decree.

16                  **H. WELDS THAT FAILED TO MEET REQUIREMENTS.**

17                  344. Welds located in the black cells and hard to reach places are  
18 subject to stringent weld requirements to ensure that the SSCs are designed  
19 and fabricated to last for a design life of 40 years without in-service  
20 inspection.

1       345. In 2010, Bechtel performed welding and re-welding on pipe  
2 support without issuance of a work package specifying the requirements.  
3 The resulting welds were not subject to any acceptance criteria or  
4 inspection requirements and were either not documented or improperly  
5 accepted by Field Engineering.

6       346. As a result, Bechtel knowingly, or with reckless disregard,  
7 accepted and falsely qualified, or permitted the false certification of welds  
8 that did not meet quality requirements.

9       347. Welds in confinement vessels and welds that join primary  
10 confinement components are required to undergo non destructive  
11 examination. Specifically, the welds must be subject volumetric  
12 insepection by radiographic or ultrasonic methods in accordance with  
13 ASME requirements.

14       348. In 2012, Bechtel procured from Bendalls Inc. vessels under  
15 material requisition no. 24590-QL-POA-MVA0-00012 and 24590-QL-POA-  
16 RLD-00008. These procured vessels failed to meet welding requirements,  
17 including non destructive examination requirements, but were accepted by  
18 a Bechtel Supplier Representative.

19       349. Bechtel knowingly, or with reckless disregard, accepted and  
20 falsely qualified, or permitted the false qualification by a subcontractor or  
21 supplier, of welds that did not meet quality requirements.

1       350. The costs associated with the above SSCs containing welds is  
2 not precisely known, but is estimated to be in the millions of dollars;  
3 further, the cost to the United States to reevaluate the welds and if  
4 necessary, rework or procure again SSCs containing welds, would be  
5 massive and would have a detrimental impact on the ability of DOE to  
6 meet its obligations under the Tri-Party Consent Decree.

7       I. **FIRE SAFETY SYSTEM FAILED TO MEET**  
8                   **REQUIREMENTS.**

9       351. The WTP Fire Safety System is required to install and maintain  
10 protection features as required by standards promulgated by the National  
11 Fire Protection Association (NFPA).

12       352. Bechtel installed a Fire Safety System that failed to meet NFPA  
13 standards and contractual/design requirements.

14       353. Numerous required hangers were not installed, system  
15 installation did not match locations identified in approved design  
16 drawings, seismic bracing was not installed in locations designated in  
17 design drawings, sprinklers were installed with obstructed spray patterns,  
18 hanger and supports were installed with deficiencies, and rooms/areas  
19 where required sprinkler protection were not provided.

20       354. As reported to Bechtel management by E&NS in 2012,  
21 substandard design/installation practices by subcontractors, including

1 Patriot, Inc., and a lack of engineering oversight, resulted in an installed  
2 sprinkler system with no uniformity. Specifically, there was no discernible  
3 logic to hanger placement, branch line configuration, fitting selection, or  
4 pipe sizing. As a result, system branch-line configurations were installed  
5 that form a haphazard combination of plugged tees and plugged armovers,  
6 reducers, unions, couplings, and random jogs that satisfy no system  
7 performance function.

8 355. In addition, Bechtel turned over to operations the Fire Service  
9 Water (FSW) Protection System without a complete design.

10 356. The FSW requires an uninterruptible power supply to power  
11 monitoring instrumentation and control system equipment.

12 357. The general PDSA specifically requires that the “[t]he  
13 uninterruptible power supply (UPS) provide[] power of acceptable quality,  
14 without delay or transients, when the normal power supply is not  
15 available.”

16 358. Prior to being turned over for plant operation, the safety related  
17 design of the FSW Protection System was required to be completed.

18 359. The FSW Protection System, which includes two FSW storage  
19 tanks with in-service process monitoring instrumentation, control system  
20 equipment, and two diesel drive fire water pumps, was turned over to  
21 plant operation in January of 2008 and is currently in-service.

1       360. However, as noted in a Feburary 4, 2013 email from Curtis Hall,  
2 the FSW system was signed off an approved as complete and subsequently  
3 turned over to plant operations and placed in service when it was not  
4 designed to requirements. Hall further noted that because the FSW  
5 Protection System is not design complete to the PDSA and BOD, the FSW  
6 could “degrade at any time to a condition that, if not readily detected and  
7 corrected by WTP operations personnel, would not make it capable to  
8 perform its required safety related fire protection.

9       361. The cost to the United States to reevaluate, rework, redesign,  
10 refabricate, retest and/or reinstall the Fire Safety System, would be  
11 massive and would have a detrimental impact on the ability of DOE to  
12 meet its obligations under the Tri-Party Consent Decree.

13       J. **MODIFICATIONS TO CATHODIC PROTECTION SYSTEM**  
14                   **WITHOUT DESIGN BASIS.**

15       362. The WTP plant employs cathodic protection to mitigate the  
16 effects of corrosion by forcing all areas of underground pipes, which will  
17 carry the mixed waste from the Tank Farm to the WTP, to become a  
18 cathode—i.e. corrosion resistant. Without the application of cathodic  
19 protection, the underground piping would be an anode and subject to a  
20 localized type corrosion as a result of the pipeline material, moisture  
21 content of the soil, and other sources.

1       363. Cathodic protection is accomplished by the flow of current  
2 from an anode located underground near the pipes, thru the earth, to the  
3 pipeline and back to the negative terminal of the rectifier, which is a device  
4 used to convert electrical current and is also the source of electrical current.

5       364. The rectifiers output current, which is passed to the anodes and  
6 then impressed, at a controlled level, to the underground piping. The  
7 rectifiers possess adjustable output controls. Adjustable controls are  
8 necessary to ensure that the underground piping meet NACE requirements  
9 and State of Washington regulations for negative polarized potential.

10      365. On May 14, 2009, Bechtel changed the cathodic protection  
11 design to allow for the installation of ten additional horizontal anodes.  
12 These additional anodes were installed to raise the potential to acceptable  
13 NACE values.

14      366. The design change was based on the interpretation of a trouble-  
15 shooting testing by Rod Snowwhite and Doug Gilroy. They determined that  
16 10 "hot spot" anodes should be installed in the vicinity of the testing  
17 location to increase the potentials.

18      367. No calculation or evaluation was completed to address the  
19 basis for the design change.

20      368. The anode current demand and requirements were not  
21 evaluated prior to changing the design.

1       369. The anode spacing, type and length of the anode, and the  
2 distance from the protected piping were not evaluated prior to changing  
3 the design.

4       370. The circuit resistance and required rectified output voltage of  
5 the anodes were not evalauted prior to changing the design.

6       371. The efficacy of the "hot spot" anodes was to be determined  
7 during testing subsequent installation.

8       372. After the fact, Bechtel obtained a calculation to be used as a  
9 basis for the changes to the cathodic protection system.

10      373. Later testing determine that the additional ten anodes did not  
11 resolve the problem. The ten anodes lacked the sufficient current to  
12 maintain potentials as required under NACE.

13      374. In changing the cathodic protection system and installing ten  
14 additional anodes, Bechtel knowingly, or with reckless disregard, falsely  
15 certified that the modifications were within the required design basis.

16      375. The costs associated with the additonal anodes is not precisely  
17 known; however, the cost to the United States to reevaluate the design and  
18 installation of the cathodic protection system, and if necessary, rework or  
19 procure again a cathodic protection system, would be massive and would  
20 have a detrimental impact on the ability of DOE to meet its obligations  
21 under the Tri-Party Consent Decree.

1           **K. GOVERNMENT DOLLARS SPENT TO DEVELOP A TOOL**  
2           **FOR PRIVATE GAIN.**

3       376. In 2003, Bechtel's Research and Development group, which is  
4       an organization not under the WTP umbrella and is an organization  
5       separately funded by Bechtel, introduced R&T to computational fluid  
6       dynamics (CFD) using FLUENT software as a computer modeling tool.

7       377. CFD was to be utilized to demonstrate the WTP mixing design.

8       378. Upon information and belief, prior to 2003, Bechtel developed  
9       CFD for commercial use and had not previously applied CFD to mixing  
10      design.

11      379. The results of CFD failed to accurately reflect the mixing  
12      design.

13      380. Bechtel knew that CFD would more likely than not be able to  
14      accurately reflect the mixing design.

15      381. Bechtel pushed the use of CFD despite wide recognition among  
16      ORP and Bechtel employees that it could not validate and verify the  
17      design.

18      382. Since 2003, Bechtel continued to use CFD, despite its marginal  
19      capability, while simultaneously developing CFD, including necessary  
20      reprogramming, to improve its accuracy.

1       383. Upon information and belief, Bechtel required the use of CFD  
2 in order to develop and advance CFD capabilities for commercial use  
3 knowing that CFD would be unable to function at the WTP as claimed.

4           **L. FAILURE TO IMPLEMENT SAFETY REQUIREMENTS.**

5       384. The WTP is a DOE capital project governed by DOE Order  
6 413.3B, and all DOE capital projects require the integration of safety at the  
7 outset, including design development, for all functions and processes of the  
8 project. Safety integration must be maintained throughout the life of the  
9 project.

10       385. DOE capital project safety documents are governed by nuclear  
11 safety requirements as defined in 10 C.F.R. 830, and safety documents must  
12 follow the format and content requirements of DOE-STD-3009.

13       386. The Bechtel-DOE Contract and implementing procedures  
14 require that the design implement 10 C.F.R. 830 requirements for nuclear  
15 safety.

16       387. The Bechtel Safety Requirements Document Volume II, which  
17 exists to implement 10 C.F.R. 830, requires that “[t]he material [that are  
18 subject to safety requirements] shall be maintained current with respect to  
19 changes made to the facility design and administrative controls and in the  
20 light of significantly new safety information.”

1       388. Bechtel developed safety documents, identified as the  
2 Preliminary Documented Safety Analysis to Support Construction  
3 Authorization (PDSA), for the PT, LAW, HLW, and LAB facilities

4       389. The WTP PDSAs fail to contain safety requirements compliant  
5 10 C.F.R. 830.

6       390. The noncompliant requirements contained in the WTP PDSAs  
7 were used by Bechtel, or flowed down to subcontractors, for design,  
8 fabrication, and testing.

9       391. As a result, WTP safety controls designed, fabricated, tested,  
10 and/or installed at the WTP fail to meet 10 C.F.R. 830 requirements.

11       392. The following are examples of Bechtel's systemic failure to  
12 integrate safety requirements into the design:

13           **1. *The PT PDSA Failed to Identify Known Safety Hazards  
14                  in the Ultrafiltration Process System.***

15       393. In 2008, Bechtel identified hazards associated with the design of  
16 the Ultrafiltration Process System steam spargers—namely, if the  
17 temperature of the fluid in the pulse jet mixer charge vessels exceed 130° F,  
18 the liquid would flash to water vapor.

19       394. Bechtel determine that this flashing could cause a more rapid  
20 than expected accumulation of particulate matter on filters in the Pulse Jet  
21 Ventilation System. The build up on these filters, known as high efficiency

1 particulate air filters (HEPA), could result in an overblow.

2 395. An overblow would render the HEPA filters unable to fulfill  
3 their safety function.

4 396. Despite formal recognition by Bechtel of the overblow  
5 potential, past and current versions of the PT PDSA neither addressed or  
6 proposed a resolution of the hazard. The PT PDSA did not recognize the  
7 overblow potential in Ultrafiltration Process System as an unresolved  
8 hazard.

9 397. As a result, Bechtel and/or a subcontractor, designed,  
10 fabricated, tested and installed SSCs related to the Ultrafiltration Process  
11 System that failed to address mandatory safety measures pursuant to 10  
12 C.F.R. 830.

13 398. The cost to the United States to reevaluate, rework, redesign,  
14 refabricate, retest and/or reinstall the Ultrafiltration Process System would  
15 be massive and would have a detrimental impact on the ability of DOE to  
16 meet its obligations under the Tri-Party Consent Decree.

17           **2. *The PT PDSA Failed to Identify Safety Functions and***  
18           ***Changes to the PVV/PVP System.***

19 399. Bechtel is required to obtain DOE approval of nuclear safety  
20 design criteria to be used in preparing the PDSA unless Bechtel has used  
21 the design criteria identified in DOE Order 420.1.

1       400. DOE Order 420.1B and DOE-STD-3009 require that safety  
2 analyses be used to establish the safety controls and determine the  
3 functional requirements for Safety Class and Safety Significant SSCs.

4       401. The Bechtel Safety Requirements Document Volume II likewise  
5 defines Safety Class SSCs as those systems required to protect the public  
6 which include those SSCs that could inhibit another Safety Class SSCs from  
7 performing their intended function. In other words, if the failure of "SSC-  
8 1" could prevent Safety Class "SSC-2" from completing its safety function,  
9 SSC-1 must be designated as SSC.

10      402. In the PT PDSA, Bechtel failed to apply this designation to hot  
11 air in-bleeds in the PVV/PVP system.

12      403. Since 2006, Bechtel knew that the hot air in-bleeds protected the  
13 HEPA, but refused, even after notification from ORP, to update its PDSA.

14      404. As a result, Bechtel and/or a subcontractor, designed,  
15 fabricated, tested and/or installed SSCs related to the PVV/PVP System  
16 that failed to address mandatory safety measures pursuant to 10 C.F.R. 830.

17      405. In addition, in 2010 Bechtel changed WTP functional  
18 requirements by increasing the aerosol entrainment coefficient. This  
19 change significantly impacted the designed PVV/PVP filtration system due  
20 to aerosol loading during normal operations and a seismic event.

21      406. Bechtel failed to update the PT PDSA to reflect this change to

1 the PVV/PVP system.

2       407. As a result, Bechtel and/or a subcontractor, failed to re-design  
3 the impacted portions of the PVV/PVP system, continued to design the  
4 entire PVV/PVP system without considering the changed requirements,  
5 tested and/or installed SSCs related to the PVV/PVP system that failed to  
6 address mandatory safety measures pursuant to 10 C.F.R. 830.

7       408. The cost to the United States to reevaluate, rework, redesign,  
8 refabricate, retest and/or reinstall the PVV/PVP system would be massive  
9 and would have a detrimental impact on the ability of DOE to meet its  
10 obligations under the Tri-Party Consent Decree.

11       3. ***The PDSA Safety Classifications Related to the PT***  
12           ***Facility Fire Barrier Design Were Not Based on Required***  
13           ***Hazard Analyses.***

14       409. WTP PDSAs must document safety analysis. The PDSA safety  
15 evaluation includes the identification of hazards, identification of  
16 potential/event sequences, identification of potential control strategies,  
17 and documentation of the hazard evaluation.

18       410. In the PT PDSA, Bechtel defined the safety criteria for the fire  
19 barrier design without performing safety or fire hazards analyses.

20       411. Bechtel issued for procurement and construction most of the  
21 fire barrier design without having performed safety or fire hazards

1 analyses.

2       412. Because Bechtel failed to perform safety or fire hazards  
3 analyses for the fire barrier design, Bechtel could not determine whether  
4 the PDSA requirements had been properly implemented in the design, and  
5 specifically, where the fire barrier design had proper safety class  
6 designations.

7       413. The cost to the United States to reevaluate, rework, redesign,  
8 refabricate, retest and/or reinstall SSCs related to the fire barrier design  
9 would be massive and would have a detrimental impact on the ability of  
10 DOE to meet its obligations under the Tri-Party Consent Decree.

11           4. *Ability of Safety Class and Safety Significant SSCs to*  
12           *Withstand Volcanic Ashfall Event.*

13       414. Safety Class and Safety Significant SSCs must be designed to  
14 withstand the effects of natural phenomena hazards, such as volcanic  
15 ashfall, earthquakes, wind, and floods, without the SSCs losing their  
16 capability to perform intended safety functions.

17       415. Bechtel's strategy for controlling hazards during a volcanic  
18 ashfall event relies on the change-out of filters.

19       416. In February 2009, DOE questioned the approach, noting that it  
20 would be infeasible to exchange over 7000 filters in less than 24 hours.

21       417. Bechtel did not update to the PDSA of any facility to correct the

1 infeasible approach nor did Bechtel indicate in the PDSAs that a problem  
2 existed. Bechtel continued to design, fabricate, test and/or install Safety  
3 Class and Safety Significant SSCs without knowing whether the SCCs  
4 would perform intended safety functions following a volcanic ashfall  
5 event.

6       418. The cost to the United States to reevaluate, rework, redesign,  
7 refabricate, retest and / or reinstall SCCs related to the ability of Safety Class  
8 and Safety Significant SSCs to withstand volcanic ashfall would be massive  
9 and would have a detrimental impact on the ability of DOE to meet its  
10 obligations under the Tri-Party Consent Decree.

11       **M. A NONCOMPLIANT QUALITY ASSURANCE SYSTEM.**

12       419. Quality Assurance requirements for DOE contractors are  
13 mandated by 10 C.F.R. 830, Subpart A. As a result, DOE contractors are  
14 required to conform to the standards of NQA-1.

15       420. The Bechtel-DOE contract likewise requires Bechtel to comply  
16 with NQA-1, and Bechtel represents that it does DOE quality standards.

17       421. At all material times, Bechtel did not have an effective quality  
18 system. Rather, with the full knowledge and participation of its senior  
19 managers, Bechtel has for many years used its quality apparatus to create  
20 the superficial appearance of a functioning quality system while in fact

1 taking actions with the purpose and intent of hiding systemic flaws to  
2 expedite the design and construction of WTP.

3       422. Bechtel concealed SSC quality control issues by not tracking the  
4 issues as required or closing out the issues without resolving any quality  
5 issues.

6       423. Upon the identification of non-conforming SSCs, Bechtel is  
7 required to issue a non-conformance report (NCR), which documents  
8 Bechtel's approach to resolving the deficiency. A NCR may only be closed  
9 upon the determination of whether to accept the SSC "as-is", "re-work" or  
10 "repair" the SSC, or reject the SSC. Justification for the determination must  
11 be documented.

12       424. All outstanding NCRs must be reported to ORP monthly.

13       425. In 2006, Bechtel reported that it had procured Safety Class and  
14 Safety Significant SSCs that failed to meet quality requirements for seismic  
15 and environmental conditions. Instead of entering separate NCRs for each  
16 non-conforming SSC, Bechtel issued two NCRs; one for all SSCs that fail to  
17 meet seismic requirements and the other for all SSCs that fail to meet  
18 environmental requirements.

19       426. Since 2006, upon the identification of new non-conforming  
20 Safety Class or Safety Significant SSCs, Bechtel did not create a new NCR.  
21 Bechtel added the newly identified SSC to the NCR established in 2006.

1       427. Upon information and belief, Bechtel stopped creating NCRs to  
2 mask the number of non-conforming Safety Class and Safety Significant  
3 SSCs that would be reported to DOE on a monthly basis.

4       428. In the few instances where NCR reports have been issued for  
5 non-conforming Safety Class and Safety Significant SSCs, Bechtel accepted  
6 the product for use “as-is” without providing justification sufficient to  
7 meet quality requirements.

8       429. By way of example, in November of 2010, a series of NCRs  
9 were entered to document the receipt of piping of an indeterminate quality  
10 procured from Shaw Naptech. This piping was designated as Safety Class  
11 or Safety Significant and thus was required to meet stringent pedigree  
12 requirements. Bechtel determined the pipe could be used “as-is” in safety  
13 applications, justifying its decision through samples tested from “similar”  
14 piping spools. This justification did not resolve the traceability or pedigree  
15 problems of the piping spool at issue.

16       430. In addition, WTP employees may anonymously submit  
17 concerns to the Project Issues Evaluation Report (PIER) system. Concerns  
18 are evaluated by a group that assesses whether the concern is valid and  
19 worth investigating.

20       431. Since as early as 2004, and likely earlier, PIERs have been  
21 submitted by WTP employees regarding the failure to flowdown

1 requirements to subcontractors and the acceptance of safety class and  
2 safety significant SSCs that are of an indeterminate quality.

3       432. Bechtel closed PIERs without addressing or resolving the non-  
4 conforming Safety Class or Safety Significant SSC.

5       433. In addition, Bechtel maintained multiple lists of issues to create  
6 confusion and avoid detection of all WTP issues with their list but there is  
7 no singular overall list. The various lists include, among others, the  
8 managers list, the “empty the drawers list,” and the list of reliability  
9 validation project issues—the majority of issues contained on this latter list  
10 have been excluded from the PIER system and the direction of Ward  
11 Sproat and Joe St. Julian, both Bechtel management.

12       434. To avoid formal reporting, Bill Gay of URS instructed Jennifer  
13 Meehan to develop the VCT list, also known as the Meehan list, to track  
14 technical issues related to vessel, piping, mixing and other unresolved  
15 issues. Bechtel instructed Meehan to destroy the spreadsheet in November  
16 of 2012 in order to end tracking of the issues. Meehan archived the  
17 spreadsheet.

18       435. In the Fall of 2012, the DOE Office of Enforcement and  
19 Oversight identified deficiencies in the corrective action processes  
20 stemming from management problems and lack of identification and  
21 reporting of issues.

1       436. The cost of a government contractor's quality system is factored  
2 into the cost to the United States, and a properly-functioning quality  
3 system is part of the consideration a contractor provides the United States  
4 in exchange for contract payments.

5       437. Bechtel was not only required to maintain a fully-functioning  
6 quality systems, but was given taxpayer dollars to do so.

7       **N. FALSE CLAIM FOR MONEY FOR DESCOPED WORK.**

8       438. Capital line item projects are governed by DOE Order 413.3.

9       439. DOE Order 413.3 and the Bechtel-DOE Contract required the  
10 contract to achieve 4 "Critical Decisions," which are deliverables that must  
11 be met prior to transferring the WTP to another contractor, presumably  
12 URS, for operations.

13       440. In 2011, Bechtel realized that it could not meet the deliverables  
14 required by DOE Order 413.3 and the Bechtel-DOE Contract without  
15 spending approximately \$310,000,000.

16       441. To avoid the expenditure, Bechtel strategized to obtain a phase  
17 Critical Decision-4 (CD-4), which would descope many elements of the  
18 deliverable and transfer the work to operations.

19       442. In a 2011 "Opportunity Assessment Sheet," Bechtel noted that  
20 "IF DOE directs a phased Critical Decision 4 (DOE O 413.3), THEN current  
21

1 WTP contract scope that is beyond CD-4 could be performed using funding  
2 from the DOE Operations budget thus reducing line item cost."

3       443. Bechtel proposed that these descoped portions, most of which  
4 pertained to nuclear safety, be completed by the operations contractor out  
5 of non-capital line item funds.

6       444. Despite descoping much of the CD-4 deliverable, Bechtel  
7 asserted that it could keep the money that would have been spent on the  
8 CD-4 deliverable and use that money elsewhere.

9       445. URS, as the presumed contractor for WTP operations, pushed  
10 for this as well because it would provide additional sources of money for  
11 operations.

12       446. Bechtel submitted a baseline cost proposal in 2012, requesting  
13 the descope.

14       447. Bechtel and URS, utilizing Thomas Brown, a Deputy Federal  
15 Project Director and former 20 year Bechtel executive, pushed the Federal  
16 Project Director and the Contracting Officer to approve the baseline cost  
17 approval.

18       448. Bechtel and URS, having had prior expereince with the process  
19 of descoping work subject to DOE Order 413.3, knew, or should have  
20 known, that the descope could only be approved by a Secretarial  
21 Acquisition Executive. Namely, in 2006, prior to baseline change affective

1 DOE Order 413.3 work, Bechtel requested authorization from Secretarial  
2 Acquisition Executive.

3 449. Following ORP approval of the 2012 baseline cost proposal, DOE  
4 HQ question the validity of ORP and Bechtel's actions.

5 450. Bechtel ignored DOE HQ and continued to plan as if the money  
6 was not tied to the CD-4 deliverable.

7 451. As a result, Bechtel knowingly submitted a false claim for  
8 payment of funds for descoped work.

9 **COUNT I**

10 **False Claims Act – Hanford Waste Treatment Plant**

11 452. The allegations of paragraphs 1 through 451 are realleged as if  
12 fully set forth herein.

13 453. Defendants Bechtel National Inc., Bechtel Corporation, URS  
14 Corporation, and URS Energy & Construction, Inc. by and through their  
15 officers, agents, and employees, knowingly submitted or caused to be  
16 submitted, false or fraudulent claims for payment or approval to officers,  
17 employees, or agents of the United States Government in violation of 31  
18 U.S.C. § 3729 (a)(1).

19 454. The claims were false because they claimed or certified to the  
20 United States or another contractor, within the terms of 31 U.S.C. § 3729(c),  
21 that a product was being delivered to the United States which conformed

1 to all contract requirements when that statement was false.

2 455. Defendants Bechtel National Inc., Bechtel Corporation, URS  
3 Corporation, and URS Energy & Construction, Inc. by and through their  
4 respective officers, agents, and employees, knowingly made, used, or  
5 caused to be made or used, false records or statements to obtain United  
6 States payment of false or fraudulent claims in violation of 31 U.S.C. § 3729  
7 (a)(2).

8 456. Every request for progress payment by Bechtel and/or URS to  
9 DOE with respect to the design, procurement, and construction of  
10 structures, systems and components identified in paragraphs 1 to 451  
11 intended for use in the Hanford WTP, which actually or impliedly certified  
12 that Bechtel procured, constructed, and/or installed such structures,  
13 systems, and components to drawing, quality, and DOE requirements  
14 when it failed to do so, constitutes a violation of the False Claims Act.

15 457. Every claim for payment submitted to the United States for  
16 respect to the design, procurement, and construction of structures, systems  
17 and components identified in paragraphs in which Bechtel and/or URS  
18 knew or should have known that either had falsely certified conformance  
19 constitutes a violation of the False Claims Act.

20 458. Each defendant acted with actual knowledge or reckless  
21 disregard for the truth or falsity of the claims submitted to them.

459. Each of the false statements made in each false claim to the United States or to another contractor had the potential to influence the United States' decision whether to pay the claim.

460. The amounts of the false or fraudulent claims to the United States were material.

461. Defendants violated the False Claims Act.

462. The United States has been damaged as result of Defendants' violations of the False Claims Act.

## COUNT II

## False Claims Act Conspiracy – Hanford Waste Treatment Plant

463. The allegations of paragraphs 1 through 451 are realleged as if fully set forth herein.

464. Defendants Bechtel National Inc., Bechtel Corporation URS Corporation, and URS Energy & Construction, Inc. entered into tacit and explicit agreements pursuant to which, *inter alia*, Bechtel supplied and DOE accepted, false certification documents and nonconforming product designs, builds, and reports for which Bechtel was paid as though they were conforming and so represented to the United States.

465. Defendants Bechtel National Inc., Bechtel Corporation, URS Corporation, URS Energy & Construction, Inc. conspired to defraud the United States in violation of the False Claims Act, 31 U.S.C. § 3729(c).

1       466. The United States of America has been damaged as a result of  
2 Defendants' violations of the False Claims Act.

3 **VI. DAMAGES**

4       467. Relators re-allege, and fully incorporate herein by reference,  
5 paragraphs 1 through 435 herein.

6       468. Defendants knowingly made false statements and submitted  
7 false records to secure approvals of its false claims and monies to which it  
8 is not entitled, and their violations warrant restitution of monies they  
9 fraudulently obtained or monies to repair problems resulting from  
10 Defendants' falsities.

11       469. Upon information and belief, the amount of monies  
12 fraudulently obtained is in excess of \$500 million and the amount to repair  
13 is in excess of \$1 billion.

14       470. The United States is likewise entitled to recover treble damages.

15       471. Additionally, Defendants are liable for civil penalties  
16 prescribed by 43 U.S.C. § 1350.

17 **VII. JURY REQUEST**

18       472. Plaintiffs request a trial by jury.

19 **VIII. PRAYER FOR RELIEF**

20       473. WHEREFORE, Plaintiff, United States of America, through  
21 Relators, request the Court enter the following relief:

a. That Defendants be ordered to cease and desist from violating 31 U.S.C. § 3729 *et seq.*;

b. That this Court enter judgment against Defendants in an amount equal to three times the amount of damages the United States has sustained because of Defendants' actions, plus a civil penalty of not less than \$5,500 and not more than \$11,000 for each violation of 31 U.S.C. § 3729;

c. That Relators be awarded the maximum amount allowed pursuant to 31 U.S.C. § 3730(d) of the False Claims Act;

d. That Relators be awarded all costs of this action, including attorneys' fees and expenses; and

e. That Relators recover such other relief as the Court deems just and proper.

All of which is respectfully submitted,

s/Richard C. Eymann  
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